



**AIR-COOLED REVERSIBLE HEAT PUMP - Technical - Installation manual**

**REVERSIBLE HEAT PUMPS**

- OUTDOOR UNIT
- HIGH EFFICIENCIES
- PRODUCTION OF HOT WATER UP TO 60 °C

**ANK**  
**020-085**  
**H | HP | HA**

EN



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participates in the EUROVENT  
Program LCP/A/P/R.  
The products of interest can be found on the  
website [www.eurovent-certification.com](http://www.eurovent-certification.com)



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Thank you for choosing an AERMEC product. This product is the result of many years of experience and in-depth engineering research, and it is built using top quality materials and advanced technologies.

In addition, the CE mark guarantees that our appliances fully comply with the requirements of the European Machinery Directive in terms of safety. We constantly monitor the quality level, and as a result AERMEC products are synonymous with Safety, Quality, and Reliability.

The data may be subject to modifications deemed necessary for improving the product at any time and without forewarning.

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# ANK

**SERIAL NUMBER**

## DECLARATION OF CONFORMITY

We, the undersigned, hereby declare under our own responsibility that the assembly in question, defined as follows:

**NAME**

**ANK**

**TYPE**

**AIR/WATER REVERSIBLE HEAT PUMP**

**MODEL**

To which this declaration refers, complies with the following harmonised standards:

**IEC EN 60335-2-40**

Safety standard regarding electrical heat pumps, air conditioners and dehumidifiers.

**IEC EN 61000-6-1**

Immunity and electromagnetic emissions for residential environments.

**IEC EN 61000-6-3**

**IEC EN 61000-6-2**

Immunity and electromagnetic emissions for industrial environments

**IEC EN 61000-6-4**

**EN378**

Refrigerating system and heat pumps - Safety and environmental requirements.

**UNI EN 12735**

Seamless, round copper pipes for air conditioning and refrigeration.

**UNI EN 14276**

Pressurised equipment for cooling systems and heat pumps.

## Thereby, compliant with the essential requirements of the following directives:

- LVD Directive: 2006/95/CE
- Electromagnetic Compatibility Directive 2004/108/CE.
- Machinery Directive 2006/42/CE
- PED Directive regarding pressurised devices 97/23/CE (Form A)

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Bevilacqua 01/04/2011

Marketing Manager  
Signature

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**Standards complied with  
WHEN DESIGNING and  
MANUFACTURING the unit:**  
**SAFETY**

1. Machinery Directive 2006/42/CE
2. Low Voltage Directive LVD 2006/95/CE
3. Electromagnetic Compatibility Directive EMC 2004/108/EC
4. Directive regarding pressurised devices PED 97/23/CE, EN 378,
5. UNI12735, UNI14276

**ELECTRIC PART**

1. IEC EN 60335-2-40,
2. IEC EN 61000-6-1/2/3/4

**ACOUSTIC PART**

1. ISO DIS 9614/2  
(intensimetric method)

**PROTECTION RATING**  
**IP24**

**CERTIFICATIONS**

1. EUROVENT
2. EHPA

**REFRIGERANT GAS**

This unit contains fluoride gases with greenhouse effect covered by the Kyoto Protocol. Maintenance and disposal must only be performed by qualified staff, in compliance with standards in force.

## 1. DESCRIPTION AND CHOICE OF THE UNIT

The OUTDOOR air-cooled heat pumps in the ANK range with R410A, have been designed and manufactured to satisfy the heating/cooling and production of DHW requirements of small to medium utilities in residential or commercial buildings.

The units are characterised by extremely silent operation and are highly efficient and reliable, thanks to the use of exchangers with a large exchange surface and low-noise high-efficiency scroll compressors.

The following versions are available:

### 1. ANK "H" Wärmepumpe <sup>1</sup>

At the same time, the versions are available with different set-ups in order to satisfy a wide range of system solutions:

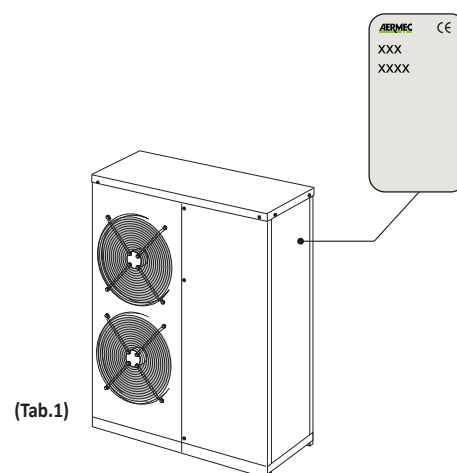
1. "O" BASE
2. "P" PUMP ONLY <sup>1</sup>
3. "A" STORAGE TANK AND PUMP

## 2. PRODUCT IDENTIFICATION

ANK can be identified by:

- PACKING LABEL, that shows the product identification data.
- TECHNICAL PLATE  
Positioned on the right lateral side-member (see TAB.1)

TECHNICAL  
PLATE



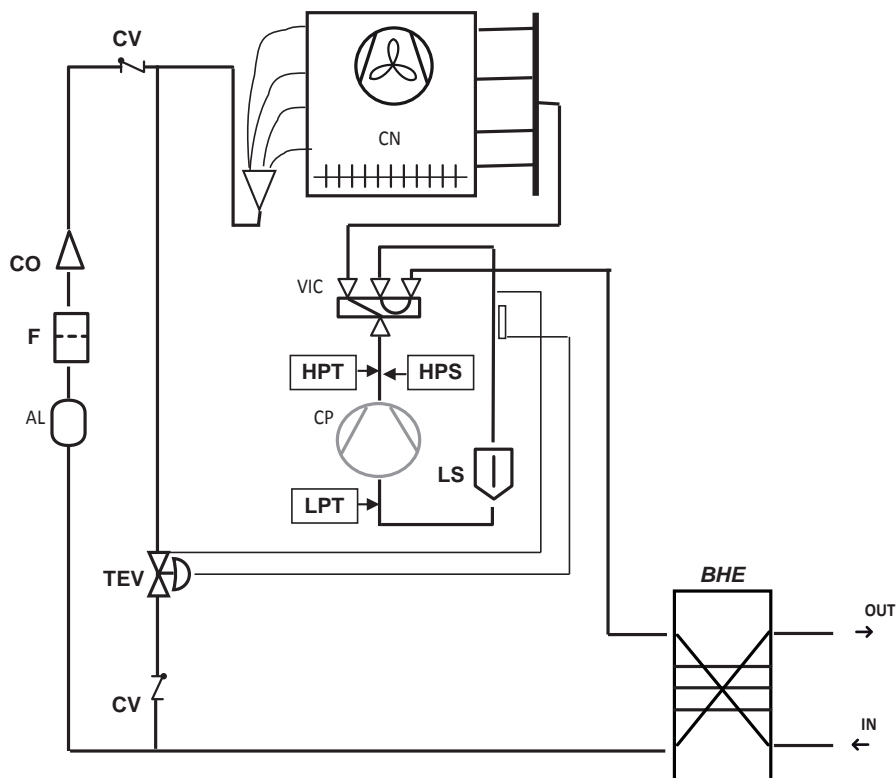
<sup>1</sup> Possibility of D.H.W. production (DCPX | VMF-DHW | MODU-485A mandatory)

## 3. CONFIGURATOR

Field	Description
<b>1,2,3</b>	<b>ANK</b>
<b>4,5,6</b>	<b>SIZE</b>
	020 - 030 - 040 - 045 - 050 - 085
<b>7</b>	<b>MODEL</b>
<b>H</b>	Heat Pump
<b>8</b>	<b>VERSION</b>
<b>SDgr</b>	Standard
<b>P</b>	Pump only
<b>A</b>	With storage tank and pump
<b>9</b>	<b>EXECUTION</b>
<b>SDgr</b>	Standard
<b>10</b>	<b>COILS</b>
<b>SDgr</b>	Aluminium
<b>R</b>	Copper
<b>S</b>	Tinned copper
<b>V</b>	In painted aluminium-copper (epoxy powders)
<b>11</b>	<b>FIELD OF USE</b>
<b>SDgr</b>	Temperature of the water produced up to 4°C
<b>Z</b>	Temperature of the water produced from 4 °C to 0 °C
<b>Y</b>	Temperature of the water produced from 0 °C to -8 °C
<b>12</b>	<b>EVAPORATOR</b>
<b>SDgr</b>	Standard
<b>13</b>	<b>POWER SUPPLY</b>
<b>SDgr</b>	400V/3N/50Hz
<b>M</b>	230V/1/50Hz for 020 - 030 - 040 - 045 models

Circuit		Components
<b>Cooling circuit</b>	<b>Model</b>	<b>H</b>
Compressors guard resistance		•
High pressure switch		•
Low pressure switch		No
High pressure transducer		•
Low pressure transducer		•
Plate exchanger		•
<b>Hydraulic circuit "H" Versions</b>		
Water filter		•
Flow switch		•
Safety valve		•
Air vent valve		•
<b>Hydraulic circuit "HP" Version</b>		
Water filter		•
Flow switch		•
Safety valve		•
Air vent valve		•
Pump		•
Expansion vessel		•
<b>Hydraulic circuit "HA" Version</b>		
Water filter		•
Flow switch		•
Safety valve		•
Air vent valve		•
Pump (P)		•
Expansion vessel		•
Storage tank		•

## 4. MAIN COOLING LAYOUT



## KEY

CP	Compressor
HPT	High pressure transducer
HPS	High pressure switch
LPT	Low pressure transducer
VIC	Cycle reversing valve
CN	Finned coil
CV	One-way valve
CO	Calibrated orifice
F	Dehydrator filter
AL	Liquid storage tank
TEV	Thermostatic valve
BHE	Plate exchanger
V	Fan/s



## 5. DESCRIPTION OF COMPONENTS

### 5.1. COOLING CIRCUIT

#### COMPRESSORS

Rotary scroll hermetic compressors with 2-pole electric motor. All compressors are fitted with guard resistance, internal electronic circuit breaker protection with centralised manual rearm.

#### SYSTEM SIDE HEAT EXCHANGER

Braze welded AISI 316 steel plate exchanger, insulated externally with closed cell neoprene anti-condensation material. It is fitted with an anti-freeze electric resistance as per standard.

#### 5.1.1. WATER FEATURES

PH	6-8
Electric conductivity	Less than 200 mV/cm (25°C)
Chloride ions	Less than 50 ppm
Sulphuric acid ions	Less than 50 ppm
Total iron	Less than 0.3 ppm
Alkalinity M	Less than 50 ppm
Total hardness	Less than 50 ppm
Sulphur ions	none
Ammonia ions	None
Silicone ions	Less than 30 ppm

#### SOURCE SIDE EXCHANGER

Finned pack heat exchanger made with copper pipes and aluminium fins adequately spaced to ensure high efficiency.

#### CYCLE REVERSING VALVE

4-way cycle reversing valve. Inverts the flow of refrigerant fluid.

#### LIQUID STORAGE TANK

It compensates the difference in volume between finned coil and plate exchanger, retaining excess liquid.

#### DEHYDRATOR FILTER

Hermetic with ceramic and hygroscopic material cartridge, able to withhold impurities and any traces of humidity present in the cooling circuit.

#### NON-RETURN VALVES

Allow one-way flow of the fluid.

#### THERMOSTATIC VALVE

Mechanical, with external equaliser positioned at evaporator outlet, modulates the flow of gas to the evaporator, depending on the heat load, in order to ensure a correct heating level of the gas in the intake line.

#### SOLENOID VALVE

The valve closes when the compressor switches off, blocking the flow of refrigerant gas to the evaporator.

#### LIQUID INDICATOR LED

Used to check the correct power supply of the laminating element and any presence of humidity in the cooling circuit.

#### LIQUID SEPARATOR

Positioned in the intake line, it protects the compressor from any liquid return.

## 5.2. STRUCTURE AND FANS

#### STRUCTURE

Support structure made of hot-dipped galvanised steel sheets, painted with polyester powders, built to guarantee easy accessibility for service and maintenance.

#### FAN UNIT

Fitted with accident-protection protective mesh and made up from 6-pole motor axial fans with external rotor with IP44 protection rating. The motor is also fitted with internal manual-rearm circuit breaker protection. It is in compliance with the IEC EN 60335-2-40 Standard.

## 5.3. HYDRAULIC CIRCUIT

#### WATER FILTER

Fitted with steel filtering mesh that keeps the exchanger from clogging by impurities present in the circuit.

#### FLOW SWITCH

It has the task of controlling the correct water circulation inside the heat exchanger; if this is not the case, they block the unit.

#### SAFETY VALVE

Calibrated at 6 bar, it has conveyable discharge and intervenes by discharging over-pressure in the event of anomalous pressures.

#### AIR VENT VALVE

Manual, it discharges any air bubbles present in the hydraulic circuit. It is cut-off by a cock in order to facilitate any replacement.

### 5.3.1. ADDITIONAL COMPONENTS ENVISIONED BY THE CONFIGURATOR

#### PUMP

Offers a useful head to the system, net of the unit pressure drops.

#### EXPANSION VESSEL

A membrane with factory-set nitrogen (see technical data for capacity).

#### SYSTEM STORAGE TANK

Used to decrease the number of compressor peaks and even out the temperature of the water to be sent to the system.

Made of steel to reduce heat loss and to eliminate the formation of condensation, insulated by thick polyurethane.

It mounts a range of 200 W electric anti-freeze resistances able to ensure a minimum temperature of the stored water of +5°C with minimum outdoor temperature of -20°C. The resistances are activated by the anti-freeze probe inserted in the tank.

#### DRAIN COCK

Allows to drain circuit water.

## 5.4. SAFETY AND CONTROL COMPONENTS

#### HIGH PRESSURE SWITCH

With fixed calibration, placed on high pressure side

of cooling circuit, inhibits compressor operation if abnormal work pressure occurs.

#### LOW PRESSURE TRANSDUCER

Positioned on the low pressure side of the cooling circuit, it informs the control board of the work pressure, generating a pre-alarm in the event of anomalous pressure.

#### HIGH PRESSURE TRANSDUCER

Positioned on the high pressure side of the cooling circuit, it informs the control board of the work pressure, generating a pre-alarm in the event of anomalous pressure.

### 5.5. ELECTRIC CONTROL AND POWER BOARD

#### ELECTRIC CONTROL BOARD

In compliance with the EN 60204-1/IEC 204-1 Standards, complete with:

- door lock main isolating switch,
- magnet circuit breakers and contactors for compressors and fans,
- clamps for REMOTE PANEL (accessory),
- spring type control circuit terminal board,
- outdoor electric control board with panel and gaskets,
- electronic controller,
- evaporator pump consent relay,
- all numbered cables.

#### DOOR-LOCK ISOLATING SWITCH

The electric control board can be accessed by removing the voltage using the door lock isolating switch lever.

The isolating switch is fitted with a safety lock to prevent voltage being applied to the machine accidentally during maintenance operations.

#### CONTROL KEYBOARD

Allows complete control of the appliance. For a more in-depth description please refer to the user manual.

#### Electronic modu control ADJUSTMENT

Temperature control of the outlet water with proportional-integral algorithm: maintains average output temperature at value set

- Self-adapting differential switch: guarantees minimum operating times of the compressor in systems with low water content.
- Intelligent defrosting for pressure reduction: optimisation of the defrosting cycles in order to prevent useless defrosting and to increase the efficiency in heating mode.
- Set-point compensation with external temperature (with external air probe accessory): reduces energy consumption.
- Condensation check based on the pressure rather than on temperature for absolute stability (with DCPX fan revs. adjuster accessory).
- Inverse condensation check for the heat pump operating mode also in summer, production of DHW (with DCPX fans revs. adjuster accessory).
- Pre-alarms with automatic reset: in the case of alarm, a certain number of re-starts are allowed before the definitive block.
- Alarm on the  $\Delta T$ : to identify wiring errors (reverse rotation) or blocked cycle reversing valve.
- Compressor operating hours count.
- Compressor peak count.
- Historical alarms.
- Autostart after voltage drop.
- Local or remote control.

#### Display of the start of the unit:

1. Voltage presence
2. Compressor ON/OFF
3. Operating mode (hot/cold)
4. Active alarm

#### Probes, transducers and parameters display

1. Water outlet
  2. Water inlet
  3. Coil temperature (heat pumps)
  4. Pressing line gas temperature
  5. External air temperature (heat pumps, cooling only with DCPX and probe)
  6. Flow pressure (heat pumps)
  7. Intake pressure (heat pumps)
  8. Set-point temperature error (sum of the proportional and integral error)
  9. Stand-by times for start-up/switch-off of the compressor
  10. Alarms/pre-alarms management
  11. Low pressure
  12. High pressure (primary alarm: the pressure switch directly blocks supply to compressor)
  13. High discharge temperature
  14. Anti-freeze
  15. Flow switch
  16. Alarm on the  $\Delta T$ :
  17. Compressor magnet circuit breaker
  18. Probes fault alarm
- Pre-alarms with automatic reset with limited number of re-start attempts before blocking.
  - ON/OFF from external contact.
  - Season change from external contact.

For further information, refer to the user manual.

## 6. ACCESSORIES

### VT ANTI-VIBRATION MOUNTS

Group of anti-vibration mounts.

#### MODU-485A <sup>2</sup>

RS-485 interface for supervising systems with MODBUS protocol.

#### DCPX <sup>2</sup>

Fan speed control devices allowing correct operation of the cooling unit within the temperature range from +20°C to -10°C, in heat pump mode, in the summer period for the production of DHW up to +42°C (refer to the operational limits graphics).

#### DRE <sup>3</sup>

Electronic device for reduction of the peak current (about 30% in the single circuit, 26% in the twin circuit and 22% in the triple circuit).

#### KR B1/B2 <sup>4</sup>

Electric resistance kit for base; avoids the formation of ice in the base.

#### BSKW

Electric resistances kit for installation outside the unit, with single-phase and three-phase power supply:

- BS4KW230M (4 kW, 230V/1/50Hz)
- BS6KW230M (6 kW, 230V/1/50Hz)
- BS6KW400T (6 kW, 400V/3/50Hz)
- BS9KW400T (9 kW, 400V/3/50Hz)

### BDX

Condensate collection tray.

#### PR3 Simplified remote panel.

Allows basic control of the machine (start-up/switch-off, change operating mode, alarms summary and reset). The maximum installation distance admitted is 150 m with 7-pole cable plus minimum section shielding of 0.5 mm.

#### VMF-CRP

It is the additional module for the management of the area pumps (up to 4 for every expansion) or to control the switch-on/off of a boiler and up to 3 heat recovery units simultaneously.

#### VMF-VOC

It is a probe that detects the quality of the air used to activate the heat recovery unit.

#### VMF-ACS <sup>2</sup>

Electric control board for the complete command/control of a DHW storage tank:

1. 3-way control valve
2. anti-legionella
3. temperature probe
4. integrative resistance:
  - 3 kW single-phase | three-phase
  - 6 kW three-phase
  - 8 kW three-phase

### VMF-E5B | N <sup>2</sup>

Black or white recessing panel, with back-lit graphical LCD display and capacitive keyboard. It allows centralised command/control of:

1. a complete hydronic system made up from fan coils with 1 master + maximum 5 slaves;
2. pump chiller (**RS 485 INTERFACE AND RESPECTIVELY MODU-485A MANDATORY ACCESSORY**);
3. pumps: maximum 12 configurable area pumps (VMF-CRP accessory);
4. boiler: management of boiler consent for the production of hot water (VMF-CRP accessory);
5. heat recovery units: maximum 3 consents for programmable recovery units according to time periods and/or via the detection of the air quality obtained using the VMF-VOC accessory, DHW module (VMF-CRP accessory);
6. complete management of the DHW production (**VMF-DHW ACCESSORY see above**).

ANK	VERS.	020	030	040	045	050	085
VT	H-HP	VT9	VT9	VT9	VT9	VT9	VT9
	HA	VT15A	VT15A	VT15A	VT15A	VT15A	VT15A
BDX		BDX8	BDX9	BDX9	BDX9	BDX9	BDX9

#### ELECTRIC ACCESSORIES

DRE5 <sup>4</sup>	ALL	•	•	•	•	•	•
DCPX51 <sup>2</sup>	ALL	•	•	•	•	•	•
MODU-485A <sup>2</sup>	ALL	•	•	•	•	•	•
VMF-CRP	ALL	•	•	•	•	•	•
VMF-VOC	ALL	•	•	•	•	•	•
VMF-E5B or N	ALL	•	•	•	•	•	•
VMF-ACS3KM	230V-1	•	•	•	•		
VMF-ACS3KTN	400V-3N	•	•	•	•	•	•
VMF-ACS6KTN	400V-3N	•	•	•	•	•	•
VMF-ACS8KTN	400V-3N	•	•	•	•	•	•
KRB1 <sup>4</sup>	ALL	•					
KRB2 <sup>4</sup>	ALL		•	•	•	•	•
PR3	ALL	•	•	•	•	•	•
BS4KW230M		•	•	•	•		
BS6KW230M		•	•	•	•		
BS6KW400T		•	•	•	•	•	•
BS9KW400T		•	•	•	•	•	•

<sup>2</sup> The **MODU-485A** | **DCPX** | **VMF-ACS** | **VMF E5** accessories are mandatory for the management and production of DHW.

<sup>3</sup> Available only with 400V/3N power supply. Only applicable in the factory.

<sup>4</sup> Only applicable in the factory.

## 7. EHPA 400V/3N/50Hz TECHNICAL DATA

A 2/W 35			ANK020	ANK030	ANK040	ANK045	ANK050	ANK085
Heating capacity	H	kW	6.260	8.179	9.764	11.239	11.556	13.300
	HP-HA		6.048	8.045	9.610	11.021	11.330	12.568
Input power	H	kW	1.870	2.545	3.074	3.378	3.550	4.110
	HP-HA		1.940	2.583	3.097	3.467	3.649	4.045
COP	H	W/W	3.348	3.214	3.176	3.327	3.255	3.236
	HP-HA		3.118	3.115	3.103	3.179	3.105	3.107
Water flow rate	ALL	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALL	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALL	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALL		68.0	70.5	70.5	70.5	70.5	70.5
A 7/W 35			ANK020	ANK030	ANK040	ANK045	ANK050	ANK085
Heating capacity	H	kW	8.560	10.700	13.134	14.806	16.266	18.760
	HP-HA		8.256	10.620	12.980	14.587	16.040	18.266
Input power	H	kW	1.970	2.664	3.249	3.548	3.814	4.330
	HP-HA		2.093	2.668	3.261	3.637	3.914	4.427
COP	H	W/W	4.345	4.017	4.042	4.173	4.265	4.333
	HP-HA		3.945	3.981	3.980	4.011	4.098	4.126
Water flow rate	ALL	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALL	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALL	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALL		68.0	70.5	70.5	70.5	70.5	70.5
A -7/W 35			ANK020	ANK030	ANK040	ANK045	ANK050	ANK085
Heating capacity	H	kW	4.810	5.872	7.300	8.136	9.524	10.480
	HP-HA		4.897	5.748	7.208	7.936	9.316	10.364
Input power	H	kW	1.850	2.573	3.102	3.334	3.596	4.030
	HP-HA		1.926	2.612	3.121	3.422	3.696	4.160
COP	H	W/W	2.600	2.282	2.353	2.440	2.648	2.600
	HP-HA		2.543	2.201	2.310	2.319	2.521	2.491
Water flow rate	ALL	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALL	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALL	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALL		68.0	70.5	70.5	70.5	70.5	70.5

### Data in compliance with the EN 14511-2 Standard

Condenser inlet water temperature 30°C  
 Condenser outlet water temperature 35°C  
 External air temperature 7°C d.b./6° C w.b.

### Sound power

Aermec determines sound power values on the basis of measurements made in compliance with the ISO 9614-2 Standard, in agreement with that requested by Eurovent certification.

### Sound pressure

Sound pressure in free field conditions on reflective surface (directivity factor Q=2) at 10 mt from the external surface of unit, in compliance with ISO 3744 regulations.

## EHPA 400V/3N/50Hz technical data

A -15/W 35			ANK020	ANK030	ANK040	ANK045	ANK050	ANK085
Heating capacity	H	kW	3.730	4.690	5.748	6.084	7.159	7.910
	HP-HA		3.559	4.633	5.674	5.994	7.052	8.067
Input power	H	kW	1.840	2.555	3.111	3.323	3.565	4.030
	HP-HA		1.890	2.586	3.131	3.394	3.646	4.108
COP	H	W/W	2.027	1.836	1.848	1.831	2.008	1.963
	HP-HA		1.883	1.792	1.812	1.766	1.934	1.964
Water flow rate	ALLES	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALLES	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALLES	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALLES		68.0	70.5	70.5	70.5	70.5	70.5
A 7/W 45								
Heating capacity	H	kW	7.980	9.741	11.882	13.639	14.906	17.450
	HP-HA		7.741	7.611	11.733	13.428	14.686	16.835
Input power	H	kW	2.310	3.112	3.792	4.182	4.436	5.120
	HP-HA		2.373	3.150	3.815	4.271	4.536	5.172
COP	H	W/W	3.455	3.130	3.133	3.261	3.360	3.408
	HP-HA		3.262	2.416	3.075	3.144	3.238	3.255
Water flow rate	ALLES	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALLES	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALLES	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALLES		68.0	70.5	70.5	70.5	70.5	70.5
A 2/W 45								
Heating capacity	H	kW	5.757	7.878	9.181	10.622	10.671	12.018
	HP-HA		5.679	7.773	9.065	10.459	10.513	11.832
Input power	H	kW	2.236	3.006	3.674	4.031	4.263	4.843
	HP-HA		2.285	3.043	3.697	4.147	4.359	4.931
COP	H	W/W	2.575	2.621	2.499	2.635	2.503	2.482
	HP-HA		2.485	2.554	2.452	2.522	2.412	2.400
Water flow rate	ALLES	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALLES	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALLES	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALLES		68.0	70.5	70.5	70.5	70.5	70.5
A -7/W 45								
Heating capacity	H	kW	4.559	4.872	5.963	7.290	8.066	9.199
	HP-HA		4.454	4.758	5.888	7.105	7.874	8.992
Input power	H	kW	2.205	2.928	3.575	3.971	4.180	4.774
	HP-HA		2.255	2.966	3.597	4.058	4.279	4.865
COP	H	W/W	2.068	1.664	1.668	1.836	1.930	1.927
	HP-HA		1.975	1.604	1.637	1.751	1.840	1.848
Water flow rate	ALLES	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALLES	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALLES	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALLES		68.0	70.5	70.5	70.5	70.5	70.5

## Data in compliance with the EN 14511-2 Standard

Condenser inlet water temperature 30°C  
 Condenser outlet water temperature 35°C  
 External air temperature 7°C d.b./6°C w.b.

## Sound power

Aermec determines sound power values on the basis of measurements made in compliance with the 9614-2 Standard, in agreement with that requested by Eurovent certification.

## Sound pressure

Sound pressure in free field conditions on reflective surface (directivity factor Q=2) at 10 mt from the external surface of unit, in compliance with ISO 3744 regulations.

A -15/W 45			ANK020	ANK030	ANK040	ANK045	ANK050	ANK085
Heating capacity	H	kW	3.038	4.001	4.897	5.511	6.457	7.367
	HP-HA		2.998	3.951	4.839	5.420	6.358	7.267
Input power	H	kW	2.163	2.910	3.550	3.950	4.150	4.726
	HP-HA		2.209	2.950	3.580	4.030	4.250	4.816
COP	H	W/W	1.405	1.375	1.379	1.395	1.556	1.559
	HP-HA		1.357	1.339	1.352	1.345	1.496	1.509
Water flow rate	ALLES	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALLES	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALLES	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALLES		68.0	70.5	70.5	70.5	70.5	70.5
A 20/W 55								
Heating capacity	H	kW	9.640	11.885	14.524	16.635	18.100	21.520
	HP-HA		9.332	11.730	14.342	16.380	17.827	20.656
Input power	H	kW	2.930	3.940	4.810	5.310	5.640	6.540
	HP-HA		2.983	3.990	4.840	5.420	5.760	6.433
COP	H	W/W	3.290	3.016	3.020	3.133	3.209	3.291
	HP-HA		3.128	2.940	2.963	3.022	3.095	3.211
Water flow rate	ALLES	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALLES	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALLES	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALLES		68.0	70.5	70.5	70.5	70.5	70.5
A 7/W 55								
Heating capacity	H	kW	7.210	8.680	10.672	12.328	13.887	15.800
	HP-HA		6.918	8.607	10.548	12.223	13.752	15.524
Input power	H	kW	2.710	3.562	4.445	5.015	5.238	6.020
	HP-HA		2.817	3.665	4.473	5.223	5.435	6.146
COP	H	W/W	2.661	2.437	2.401	2.458	2.651	2.625
	HP-HA		2.456	2.348	2.358	2.340	2.530	2.526
Water flow rate	ALLES	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALLES	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALLES	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALLES		68.0	70.5	70.5	70.5	70.5	70.5
A -7/W 55								
Heating capacity	H	kW	4.140	4.871	5.942	7.309	8.373	9.370
	HP-HA		3.853	4.796	5.866	7.201	8.235	9.121
Input power	H	kW	2.630	3.467	4.253	4.886	5.037	5.770
	HP-HA		2.732	3.570	4.279	5.094	5.233	5.893
COP	H	W/W	1.574	1.405	1.397	1.496	1.662	1.624
	HP-HA		1.410	1.343	1.371	1.414	1.574	1.548
Water flow rate	ALLES	l/h	1470	1840	2260	2550	2800	3222
Pressure drops	H	kPa	28	16	24	18	22	27
Useful head pressure	HP-HA		55.0	63.0	51.0	74.3	65.7	56.2
Air flow rate	ALLES	m³/h	3500	8000	8000	7500	7500	7500
Sound pressure	ALLES	dB(A)	37.0	39.5	39.5	39.5	39.5	39.5
Sound power	ALLES		68.0	70.5	70.5	70.5	70.5	70.5

## Data in compliance with the EN 14511-2 Standard

Condenser inlet water temperature 30°C  
 Condenser outlet water temperature 35°C  
 External air temperature 7°C d.b./6° C w.b.

## Sound power

Aermec determines sound power values on the basis of measurements made in compliance with the ISO 9614-2 Standard, in agreement with that requested by Eurovent certification.

## Sound pressure

Sound pressure in free field conditions on reflective surface (directivity factor Q=2) at 10 mt from the external surface of unit, in compliance with ISO 3744 regulations.

## EHPA 400V/3N/50Hz technical data

ELECTRICAL DATA			ANK020	ANK030	ANK040	ANK045	ANK050	ANK085
Total input current	H	A	4.6	6.1	7.5	7.9	8.8	10.2
	HP-HA	A	5.4	7.0	8.4	9.5	10.5	11.9
Maximum current (FLA)	H	A	6.1	7.7	9.1	10.6	11.8	12.3
	HP-HA	A	6.93	8.58	10	12.15	13.45	14
Initial starting current (LRA)	H	A	39.7	40.3	54.3	61.3	71.3	91.3
	HP-HA	A	40.5	41.2	55.2	62.8	73.0	93.0
SCROLL COMPRESSOR								
n°. Compressor/n°. Circuit	ALLES	N°/n°	1/1	1/1	1/1	1/1	1/1	1/1
Partialisation	ALLES	%	0-100	0-100	0-100	0-100	0-100	0-100
LOADS (The declared data can be amended any time Aermec considers it necessary)								
R410A Gas	ALLES	kg	2.87	4.32	4.32	5.55	5.96	5.96
Oil	ALLES	kg	0.9	0.9	0.9	0.9	1.2	1.2
HYDRONIC KIT								
STORAGE TANK								
Capacity		L	50	100	100	100	100	100
Resist		n°/W	1/200	1/200	1/200	1/200	1/200	1/200
EXPANSION VESSEL								
n°/capacity		n°/l	1/2	1/5	1/5	1/5	1/5	1/5
Calibration		bar	1.5	1.5	1.5	1.5	1.5	1.5
PUMP								
Input power		kW	0.16	0.17	0.18	0.31	0.33	0.34
Input current		A	0.83	0.88	0.90	1.55	1.65	1.70
SAFETY VALVE								
n°/calibration		n°/bar	1/6	1/6	1/6	1/6	1/6	1/6
DIMENSIONS								
Height		mm	1028	1281	1281	1281	1281	1281
Width	H-HP	mm	1000	1000	1000	1000	1000	1000
	HA	mm	1358	1450	1450	1450	1450	1450
Depth		mm	400	450	450	450	450	450
Weight	H	kg	118	149	152	165	172	174
	HP	kg	123	154	157	175	182	184
	HA	kg	160	211	214	232	238	241

**ATTENTION**

The capacities declared refer to the condition (7 A/W 35)

**Data in compliance with the EN 14511-2 Standard**

Condenser inlet water temperature 30°C  
 Condenser outlet water temperature 35°C  
 External air temperature 7°C K.T./6°C F.K.

**Sound power**

Aermec determines sound power values on the basis of measurements made in compliance with the 9614-2 Standard, in agreement with that requested by Eurovent certification.

**Sound pressure**

Sound pressure in free field conditions on reflective surface (directivity factor Q=2) at 10 mt from the external surface of unit, in compliance with ISO 3744 regulations.

Model				020	030	040	045	050	085
Heating capacity	H	230V/1/50Hz	kW	7.98	10.05	10.88	13.50	-	-
		400V/3N/50Hz	kW	7.98	10.05	12.26	14.07	15.38	17.49
	HP-HA	230/1/50Hz	kW	7.87	9.91	10.74	13.29	-	-
		400V/3N/50Hz	kW	7.87	9.91	12.10	13.85	15.15	17.25
Input power	H	230V/1/50Hz	kW	2.54	3.11	3.47	3.88	-	-
		400V/3N/50Hz	kW	2.50	3.11	3.79	4.18	4.44	5.07
	HP-HA	230/1/50Hz	kW	2.59	3.15	3.51	3.98	-	-
		400V/3N/50Hz	kW	2.55	3.15	3.81	4.27	4.54	5.16
Water flow rate	H	230V/1/50Hz	l/h	1370	1730	1870	2320	-	-
		400V/3N/50Hz	l/h	1370	1730	2110	2420	2650	3010
	HP-HA	230/1/50Hz	l/h	1350	1700	1850	2290	-	-
		400V/3N/50Hz	l/h	1350	1700	2080	2380	2610	2970
Exchanger   piping pressure drops	H	230V/1/50Hz	kPa	21	13	16	15	-	-
		400V/3N/50Hz	kPa	21	13	19	17	20	24
Water filter pressure drops	H		kPa	2	2	3	4	5	6
Useful head pressure	HP-HA	230/1/50Hz	kPa	61.5	67.0	63.0	80.0	-	-
		400V/3N/50Hz	kPa	61.5	67.0	57.0	78.5	71.0	64.0

Cooling capacity	H	230V/1/50Hz	kW	6.82	8.15	9.55	11.69	-	-
		400V/3N/50Hz	kW	6.76	8.15	10.48	11.57	13.04	15.48
	HP-HA	230/1/50Hz	kW	6.91	8.25	9.67	11.85	-	-
		400V/3N/50Hz	kW	6.84	8.25	10.61	11.74	13.22	15.68
Input power	H	230V/1/50Hz	kW	2.36	2.82	3.24	3.73	-	-
		400V/3N/50Hz	kW	2.33	2.82	3.55	3.98	4.34	5.22
	HP-HA	230/1/50Hz	kW	2.43	2.89	3.30	3.88	-	-
		400V/3N/50Hz	kW	2.41	2.89	3.61	4.12	4.49	5.35
Water flow rate	H	230V/1/50Hz	l/h	1170	1400	1640	2010	-	-
		400V/3N/50Hz	l/h	1160	1400	1800	1990	2240	2660
	HP-HA	230/1/50Hz	l/h	1190	1420	1660	2040	-	-
		400V/3N/50Hz	l/h	1180	1420	1820	2020	2270	2700
Exchanger   piping pressure drops	H	230V/1/50Hz	kPa	15	8	12	11	-	-
		400V/3N/50Hz	kPa	15	8	14	11	15	20
Filter pressure drops	H		kPa	1.5	1.5	2	3	4	5
Useful head pressure	HP-HA	230/1/50Hz	kPa	68.0	74.0	68.0	86.0	-	-
		400V/3N/50Hz	kPa	68.0	74.0	63.0	86.0	79.0	71.0

ENERGY INDEX									
COP	H	230V/1/50Hz	W/W	3.14	3.23	3.14	3.48	-	-
		400V/3N/50Hz	W/W	3.19	3.23	3.23	3.37	3.46	3.45
	HP-HA	230/1/50Hz	W/W	3.04	3.15	3.06	3.34	-	-
		400V/3N/50Hz	W/W	3.09	3.15	3.18	3.24	3.34	3.34
EER	H	230V/1/50Hz	W/W	2.89	2.89	2.95	3.13	-	-
		400V/3N/50Hz	W/W	2.90	2.89	2.95	2.91	3.00	2.97
	HP-HA	230/1/50Hz	W/W	2.84	2.85	2.93	3.06	-	-
		400V/3N/50Hz	W/W	2.84	2.85	2.94	2.85	2.94	2.93
ESEER		230/1/50Hz	W/W	3.34	3.36	3.43	3.60	-	-
		400V/3N/50Hz	W/W	3.37	3.34	3.43	3.38	3.57	3.52

ELECTRICAL DATA									
Total input current in heating mode <sup>1</sup>	H	230V/1/50Hz	A	12.0	14.3	16.8	18.8	-	-
		400V/3N/50Hz	A	4.6	6.1	7.5	7.9	8.8	10.2
Total input current in cooling mode <sup>1</sup>	H	230V/1/50Hz	A	11.1	13.0	15.6	18.3	-	-
		400V/3N/50Hz	A	4.3	5.6	7.0	7.6	8.6	10.5
Maximum current (FLA)	H	230V/1/50Hz	A	13.9	19.4	22.2	25.0	-	-
		400V/3N/50Hz	A	6.1	7.7	9.1	10.6	11.8	12.3
Initial starting current (LRA)	H	230V/1/50Hz	A	45.0 <sup>2</sup>	45.0 <sup>2</sup>	45.0 <sup>2</sup>	45.0 <sup>2</sup>	-	-
		400V/3N/50Hz	A	39.7	40.3	54.3	61.3	71.3	91.3

## DATA DECLARED ACCORDING TO UNI EN 14511-2

## HEATING

Condenser inlet water temperature 40°C  
 Condenser outlet water temperature 45°C  
 External air temperature 7°C d.b. 6°C w.b.

## COOLING

Evaporator inlet water temperature 7°C  
 Evaporator outlet water temperature 12°C  
 External air temperature 35 °C



## ATTENTION

1. The data refer to the version without pump.
2. The 230V/1/50Hz versions have soft-start as per standard.



## technical data

Model				020	030	040	045	050	085
Heating capacity	H	230V/1/50Hz	kW	8.67	10.92	11.93	14.04	-	-
		400V/3N/50Hz	kW	8.67	10.92	13.40	14.80	16.27	18.46
	HP-HA	230V/1/50Hz	kW	8.58	10.84	11.90	13.84	-	-
		400V/3N/50Hz	kW	8.58	10.84	13.24	14.88	16.12	18.31
Input power	H	230V/1/50Hz	kW	2.12	2.64	2.88	3.27	-	-
		400V/3N/50Hz	kW	2.12	2.64	3.22	3.55	3.81	4.36
	HP-HA	230V/1/50Hz	kW	2.21	2.64	2.90	3.37	-	-
		400V/3N/50Hz	kW	2.18	2.64	3.23	3.60	3.91	4.45
Water flow rate	H	230V/1/50Hz	l/h	1490	1880	2050	2410		
		400V/3N/50Hz	l/h	1490	1880	2300	2550	2800	3180
	HP-HA	230V/1/50Hz	l/h	1480	1860	2050	2380		
		400V/3N/50Hz	l/h	1480	1860	2280	2560	2770	3150
Exchanger + piping pressure drops	H	230V/1/50Hz	kPa	25	15	19	16.2	-	-
		400V/3N/50Hz	kPa	25	15	23	18	22	26
Water filter pressure drops	H	230V/1/50Hz	kPa	3	3	4	4	5	7
Useful head pressure	HP-HA	230V/1/50Hz	kPa	56.0	63.0	58.0	78.0	-	-
		400V/3N/50Hz	kPa	56.0	63.0	51.0	74.0	67.0	58.0

Cooling capacity	H	230V/1/50Hz	kW	9.44	11.30	13.23	16.30	-	-
		400V/3N/50Hz	kW	9.36	11.30	14.52	16.04	18.07	21.43
	HP-HA	230V/1/50Hz	kW	9.57	11.43	13.38	16.54	-	-
		400V/3N/50Hz	kW	9.48	11.43	14.67	16.25	18.30	21.69
Input power	H	230V/1/50Hz	kW	2.48	2.95	3.40	3.93	-	-
		400V/3N/50Hz	kW	2.45	2.95	3.73	4.18	4.56	5.50
	HP-HA	230V/1/50Hz	kW	2.51	3.00	3.43	4.08	-	-
		400V/3N/50Hz	kW	2.48	3.00	3.76	4.27	4.66	5.59
Water flow rate	H	230V/1/50Hz	l/h	1620	1940	2280	2800		
		400V/3N/50Hz	l/h	1610	1940	2500	2760	3110	3690
	HP-HA	230V/1/50Hz	l/h	1650	1970	2300	2840		
		400V/3N/50Hz	l/h	1630	1970	2520	2800	3150	3730
Exchanger + piping pressure drops	H	230V/1/50Hz	kPa	28.0	15.0	22.0	20.0	-	-
		400V/3N/50Hz	kPa	28.0	15.0	26.0	20.0	28.0	37.0
Water filter pressure drops	H	230V/1/50Hz	kPa	3	3	4.5	5	6.5	9
Useful head pressure	HP-HA	230V/1/50Hz	kPa	47.5	68.0	50.5	68.0	-	-
		400V/3N/50Hz	kPa	48.0	60.0	43.0	68.0	56.0	40.0

ENERGY INDEX									
COP	H	230V/1/50Hz		4.10	4.14	4.14	4.29	-	-
		400V/3N/50Hz		4.10	4.14	4.17	4.17	4.27	4.23
	HP-HA	230V/1/50Hz		3.89	4.10	4.10	4.11	-	-
		400V/3N/50Hz		3.94	4.10	4.10	4.13	4.12	4.11
EER	H	230V/1/50Hz		3.81	3.83	3.89	4.15	-	-
		400V/3N/50Hz		3.82	3.82	3.89	3.84	3.96	3.89
	HP-HA	230V/1/50Hz		3.81	3.81	3.90	4.05	-	-
		400V/3N/50Hz		3.82	3.81	3.90	3.81	3.93	3.88
ESEER		230V/1/50Hz		3.34	3.36	3.43	3.60	-	-
		400V/3N/50Hz		3.37	3.34	3.43	3.38	3.57	3.52

ELECTRICAL DATA									
Total input current in heating mode <sup>1</sup>	H	230V/1/50Hz	A	10.0	12.1	13.9	16.0	-	-
		400V/3N/50Hz	A	3.9	5.2	6.4	6.8	7.6	8.8
Total input current in cooling mode <sup>1</sup>	H	230V/1/50Hz	A	11.7	13.6	16.4	19.3	-	-
		400V/3N/50Hz	A	4.5	5.8	7.4	7.9	9.1	11.0
Maximum current (FLA)	H	230V/1/50Hz	A	13.9	19.4	22.2	25.0	-	-
		400V/3N/50Hz	A	6.1	7.7	9.1	10.6	11.8	12.3
Initial starting current (LRA)	H	230V/1/50Hz	A	45.0 <sup>2</sup>	45.0 <sup>2</sup>	45.0 <sup>2</sup>	45.0 <sup>2</sup>	-	-
		400V/3N/50Hz	A	39.7	40.3	54.3	61.3	71.3	91.3

## DATA DECLARED ACCORDING TO UNI EN 14511-2

## HEATING

Condenser inlet water temperature 30°C  
 Condenser outlet water temperature 35°C  
 External air temperature 7°C d.b. 6°C w.b.

## COOLING

Evaporator inlet water temperature 23°C  
 Evaporator outlet water temperature 18°C  
 External air temperature 35 °C



## ATTENTION

1. The data refer to the version without pump.
2. The 230V/1/50Hz versions have soft-start as per standard.

Model		020	030	040	045	050	085
<b>UNIT PROTECTION RATING</b>							
IP		24	24	24	24	24	24

SCROLL COMPRESSOR									
Quantity/circuit	ALL		n°/n°	1/1	1/1	1/1	1/1	1/1	1/1
Capacity control	ALL		%	0-100	0-100	0-100	0-100	0-100	0-100

LOADS (The declared data can be amended any time Aermec considers it necessary)									
R410A Refrigerant	ALL		kg	2.87	4.32	4.32	5.55	5.96	5.96
Oil	ALL		kg	0.9	0.9	0.9	0.9	1.2	1.2

SYSTEM SIDE HEAT EXCHANGER									
Quantity	ALL		n°	1	1	1	1	1	1
Electric resistances	ALL		n°/W	1/40	1/40	1/40	1/40	1/40	1/40
Water content	ALL		dm³						
Hydraulic connections (Victaulic)	ALL		Ø	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4

SYSTEM SIDE HYDRONIC KIT									
STORAGE TANK									
Storage tank			l	50	100	100	100	100	100
Storage tank resistances			n°/W	1/200	1/200	1/200	1/200	1/200	1/200

EXPANSION VESSEL									
Expansion vessel			n°/l	1/2	1/5	1/5	1/5	1/5	1/5
Expansion vessel calibration			bar	1.5	1.5	1.5	1.5	1.5	1.5

PUMP									
Input power			kW	0.16	0.17	0.18	0.31	0.33	0.34
Input current			A	0.83	0.88	0.90	1.55	1.65	1.70

SAFETY VALVE									
Safety valve			n°/bar	1/6	1/6	1/6	1/6	1/6	1/6

AXIAL FANS									
Quantity	ALL		n°	1	2	2	2	2	2
Air flow rate in cooling mode	ALL		m³/h	3500	8000	8000	7500	7500	7500
Input current	ALL		A	0.66	1.32	1.32	1.32	1.32	1.32
Input power	ALL		kW	0.15	0.3	0.3	0.3	0.3	0.3

SOUND DATA									
Sound pressure			dB(A)	37	39.5	39.5	39.5	39.5	39.5
Sound power			dB(A)	68	70.5	70.5	70.5	70.5	70.5

DIMENSIONS - WEIGHTS unit without packaging								
Height		mm	1028	1281	1281	1281	1281	1281
Width	H-HP	mm	1000	1000	1000	1000	1000	1000
	HA	mm	1358	1450	1450	1450	1450	1450
Depth		mm	400	450	450	450	450	450
Empty weight	H	kg	118	149	152	165	172	174
	HP	kg	123	154	157	175	182	184
	HA	kg	160	211	214	232	238	241

**Sound power**

Aermec determines sound power values on the basis of measurements made in compliance with the ISO 9614-2 Standard, in agreement with that requested by Eurovent certification.

**Sound pressure**

Sound pressure in free field conditions on reflective surface (directivity factor Q=2) at 10 mt from the external surface of unit, in compliance with ISO 3744 regulations.

## 9. OPERATIONAL LIMITS

In standard configuration, the appliances are not suitable for installation in salty environments. For operating limits, please refer to the diagram, valid for  $\Delta t = 5^\circ\text{C}$ .



### ATTENTION

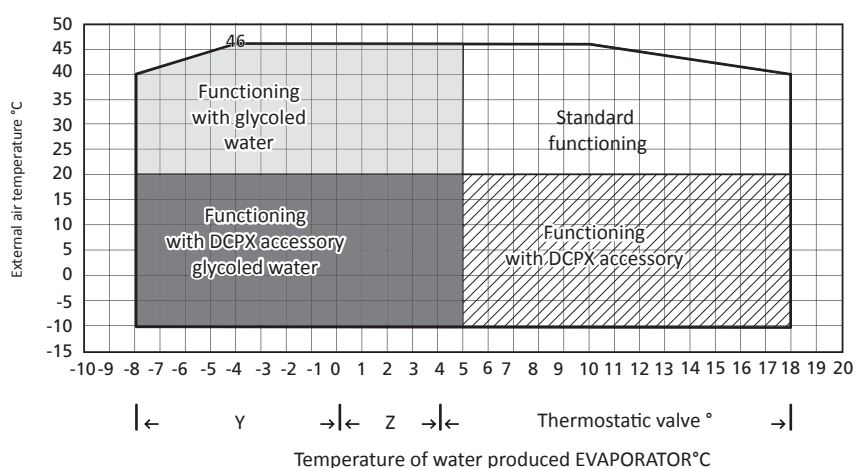
Whenever the unit is to be operated outside of the operating limits, we recommend you contact our commercial after-sales service



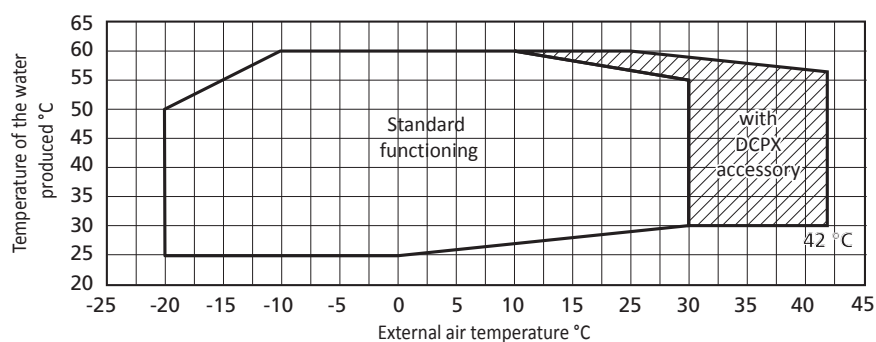
### ATTENTION

If the unit is installed in particularly windy locations, the installation of windbreaks is recommended to prevent unit malfunctioning

### 9.1. OPERATING LIMITS IN COOLING MODE GRAPHICS



### 9.2. OPERATING LIMITS IN HEATING MODE GRAPHICS



### 9.3. DESIGN DATA

REFRIGERANT SIDE		High pressure side	Low pressure side
Maximum pressure allowed	bar	22	16.5
Maximum temperature allowed	°C	125	55
Minimum temperature allowed	°C	10	-10

WATER SIDE		Condensers	Evaporator
Maximum pressure allowed	bar	16	10.5

## 10. EFFICIENCIES AND TEMPERATURES DIFFERENT FROM THE NOMINAL VALUE IN HEATING MODE

### 10.1. ANK 020 H (230V/1/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	4.54	1.57	2.89	4.24	1.83	2.32	3.89	2.04	1.91	3.51	2.21	1.59	3.08	2.36	1.31	2.61	2.51	1.04						
-18	4.67	1.57	2.97	4.38	1.83	2.39	4.04	2.05	1.97	3.68	2.23	1.65	3.27	2.38	1.37	2.83	2.53	1.12						
-16	4.82	1.56	3.09	4.54	1.83	2.48	4.22	2.05	2.06	3.87	2.23	1.74	3.48	2.39	1.46	3.06	2.55	1.20						
-14	4.99	1.55	3.22	4.71	1.83	2.57	4.41	2.05	2.15	4.08	2.24	1.82	3.72	2.40	1.55	3.32	2.56	1.30	2.90	2.73	1.06			
-12	5.18	1.55	3.34	4.91	1.83	2.68	4.61	2.05	2.25	4.30	2.24	1.92	3.96	2.40	1.65	3.60	2.56	1.41	3.20	2.73	1.17			
-10	5.37	1.54	3.49	5.11	1.82	2.81	4.83	2.05	2.36	4.54	2.24	2.03	4.22	2.40	1.76	3.88	2.57	1.51	3.52	2.74	1.28	3.14	2.94	1.07
-8	5.56	1.53	3.63	5.31	1.82	2.92	5.05	2.05	2.46	4.78	2.24	2.13	4.49	2.41	1.86	4.18	2.57	1.63	3.85	2.75	1.40	3.50	2.95	1.19
-7	5.66	1.53	3.70	5.42	1.81	2.99	5.09	2.06	2.47	4.90	2.24	2.19	4.62	2.41	1.92	4.33	2.57	1.68	4.02	2.75	1.46	3.69	2.95	1.25
-6	5.76	1.52	3.79	5.52	1.81	3.05	5.28	2.04	2.59	5.02	2.24	2.24	4.75	2.41	1.97	4.48	2.57	1.74	4.18	2.75	1.52	3.87	2.96	1.31
-4	5.96	1.52	3.92	5.73	1.81	3.17	5.50	2.05	2.68	5.26	2.24	2.35	5.02	2.41	2.08	4.77	2.58	1.85	4.51	2.76	1.63	4.24	2.96	1.43
-2	6.14	1.53	4.01	5.93	1.82	3.26	5.71	2.05	2.79	5.50	2.25	2.44	5.29	2.42	2.19	5.07	2.59	1.96	4.84	2.77	1.75	4.61	2.97	1.55
0	6.32	1.54	4.10	6.12	1.83	3.34	5.92	2.06	2.87	5.73	2.26	2.54	5.54	2.43	2.28	5.35	2.60	2.06	5.17	2.78	1.86	4.97	2.98	1.67
1	6.41	1.54	4.16	6.21	1.84	3.38	6.02	2.07	2.91	5.84	2.27	2.57	5.66	2.44	2.32	5.49	2.61	2.10	5.32	2.79	1.91	5.15	2.99	1.72
2				6.51	1.85	3.52	6.15	1.92	3.20	5.96	2.28	2.61	5.76	2.27	2.54	5.63	2.62	2.15	5.46	2.80	1.95	5.24	3.00	1.75
4				7.58	1.87	4.05	7.24	2.11	3.43	6.98	2.30	3.03	6.76	2.48	2.73	6.56	2.64	2.48	6.34	2.82	2.25	6.06	3.02	2.01
6				8.52	1.91	4.46	8.16	2.14	3.81	7.87	2.34	3.36	7.62	2.51	3.04	7.39	2.67	2.77	7.12	2.85	2.50	6.78	3.05	2.22
7				8.94	1.93	4.63	8.67	2.12	4.09	8.27	2.36	3.50	7.98	2.54	3.14	7.76	2.69	2.88	7.47	2.87	2.60	7.11	3.07	2.32
8				9.33	2.04	4.57	8.95	2.23	4.01	8.65	2.40	3.60	8.38	2.57	3.26	8.10	2.74	2.96	7.79	2.92	2.67	7.41	3.11	2.38
10				10.03	2.13	4.71	9.64	2.32	4.16	9.32	2.49	3.74	9.02	2.66	3.39	8.72	2.82	3.09	8.38	3.00	2.79	7.95	3.18	2.50
12				10.61	2.21	4.80	10.22	2.40	4.26	9.89	2.57	3.85	9.58	2.73	3.51	9.25	2.90	3.19	8.88	3.07	2.89	8.41	3.25	2.59
14				11.09	2.28	4.86	10.70	2.47	4.33	10.37	2.64	3.93	10.05	2.80	3.59	9.70	2.96	3.28	9.30	3.13	2.97	8.81	3.31	2.66
16				11.30	2.35	4.81	10.98	2.53	4.34	10.70	2.70	3.96	10.43	2.86	3.65	10.11	3.02	3.35	9.73	3.18	3.06	9.23	3.36	2.75
18				11.60	2.40	4.83	11.29	2.58	4.38	11.02	2.75	4.01	10.74	2.91	3.69	10.43	3.07	3.40	10.04	3.23	3.11	9.54	3.40	2.81
20				11.85	2.45	4.84	11.54	2.63	4.39	11.27	2.79	4.04	11.00	2.95	3.73	10.69	3.11	3.44	10.29	3.27	3.15	9.79	3.44	2.85
22				12.04	2.48	4.85	11.74	2.66	4.41	11.47	2.83	4.05	11.20	2.99	3.75	10.89	3.14	3.47	10.49	3.30	3.18	9.98	3.47	2.88
24				12.18	2.51	4.85	11.89	2.69	4.42	11.63	2.86	4.07	11.36	3.02	3.76	11.04	3.17	3.48	10.64	3.33	3.20	10.12	3.50	2.89
26				12.27	2.54	4.83	11.99	2.72	4.41	11.74	2.88	4.08	11.47	3.04	3.77	11.15	3.19	3.50	10.75	3.35	3.21			
28				12.33	2.55	4.84	12.06	2.74	4.40	11.81	2.90	4.07	11.54	3.06	3.77	11.23	3.21	3.50	10.83	3.37	3.21			
30				12.37	2.57	4.81	12.10	2.75	4.40	11.85	2.91	4.07	11.59	3.07	3.78	11.28	3.22	3.50	10.87	3.38	3.22			
32				12.37	2.57	4.81	12.12	2.75	4.41	11.88	2.92	4.07	11.62	3.08	3.77	11.30	3.23	3.50	10.89	3.38	3.22			
34				12.36	2.57	4.81	12.11	2.75	4.40	11.88	2.92	4.07	11.62	3.08	3.77	11.31	3.23	3.50	10.90	3.39	3.22			
36				12.34	2.57	4.80	12.10	2.75	4.40	11.87	2.92	4.07	11.62	3.08	3.77	11.31	3.23	3.50	10.90	3.39	3.22			
38				12.32	2.56	4.81	12.09	2.75	4.40	11.86	2.91	4.08	11.62	3.07	3.79	11.31	3.23	3.50	10.89	3.39	3.21			
40				12.30	2.55	4.82	12.07	2.74	4.41	11.86	2.91	4.08	11.61	3.07	3.78	11.30	3.22	3.51	10.89	3.38	3.22			
42				12.28	2.53	4.85	12.07	2.72	4.44	11.86	2.90	4.09	11.62	3.06	3.80	11.31	3.21	3.52	10.90	3.37	3.23			



#### ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

#### DATA DECLARED ACCORDING TO UNI EN 14511-2

##### Key

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96


## 10.2. ANK 020 HP | HA (230V/1/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	4.48	1.60	2.80	4.18	1.87	2.24	3.84	2.08	1.85	3.46	2.26	1.53	3.04	2.41	1.26	2.57	2.56	1.00						
-18	4.61	1.60	2.88	4.31	1.87	2.30	3.99	2.09	1.91	3.63	2.27	1.60	3.23	2.43	1.33	2.79	2.58	1.08						
-16	4.76	1.59	2.99	4.47	1.87	2.39	4.16	2.09	1.99	3.81	2.28	1.67	3.44	2.44	1.41	3.02	2.60	1.16						
-14	4.93	1.58	3.12	4.65	1.87	2.49	4.35	2.09	2.08	4.02	2.28	1.76	3.66	2.45	1.49	3.28	2.61	1.26	2.86	2.78	1.03			
-12	5.11	1.58	3.23	4.84	1.86	2.60	4.55	2.09	2.18	4.24	2.28	1.86	3.91	2.45	1.60	3.55	2.61	1.36	3.16	2.79	1.13			
-10	5.29	1.57	3.37	5.04	1.86	2.71	4.76	2.09	2.28	4.47	2.28	1.96	4.16	2.45	1.70	3.83	2.62	1.46	3.47	2.80	1.24	3.09	3.00	1.03
-8	5.49	1.56	3.52	5.24	1.85	2.83	4.98	2.09	2.38	4.71	2.28	2.07	4.42	2.45	1.80	4.12	2.62	1.57	3.80	2.80	1.36	3.45	3.01	1.15
-7	5.59	1.56	3.58	5.34	1.85	2.89	4.98	2.12	2.35	4.83	2.28	2.12	4.57	2.47	1.85	4.27	2.62	1.63	3.96	2.80	1.41	3.64	3.01	1.21
-6	5.68	1.55	3.66	5.45	1.85	2.95	5.20	2.08	2.50	4.95	2.28	2.17	4.69	2.46	1.91	4.41	2.63	1.68	4.12	2.81	1.47	3.82	3.02	1.26
-4	5.87	1.55	3.79	5.65	1.85	3.05	5.42	2.09	2.59	5.19	2.29	2.27	4.95	2.46	2.01	4.71	2.63	1.79	4.45	2.81	1.58	4.19	3.02	1.39
-2	6.06	1.56	3.88	5.85	1.85	3.16	5.63	2.09	2.69	5.42	2.29	2.37	5.21	2.47	2.11	5.00	2.64	1.89	4.78	2.82	1.70	4.55	3.03	1.50
0	6.23	1.57	3.97	6.03	1.86	3.24	5.84	2.10	2.78	5.65	2.30	2.46	5.46	2.48	2.20	5.28	2.65	1.99	5.09	2.83	1.80	4.91	3.04	1.62
1	6.32	1.57	4.03	6.12	1.87	3.27	5.94	2.11	2.82	5.76	2.31	2.49	5.59	2.49	2.24	5.42	2.66	2.04	5.25	2.84	1.85	5.08	3.05	1.67
2				6.42	1.88	3.41	6.05	1.94	3.12	5.88	2.32	2.53	5.68	2.32	2.45	5.55	2.67	2.08	5.38	2.85	1.89	5.16	3.06	1.69
4				7.48	1.91	3.92	7.14	2.15	3.32	6.88	2.35	2.93	6.67	2.52	2.65	6.47	2.69	2.41	6.25	2.87	2.18	5.98	3.08	1.94
6				8.40	1.94	4.33	8.04	2.18	3.69	7.76	2.38	3.26	7.52	2.56	2.94	7.28	2.73	2.67	7.02	2.90	2.42	6.69	3.11	2.15
7				8.82	1.97	4.48	8.58	2.21	3.88	8.16	2.40	3.40	7.87	2.59	3.04	7.65	2.75	2.78	7.36	2.92	2.52	7.01	3.13	2.24
8				9.20	2.08	4.42	8.83	2.27	3.89	8.53	2.45	3.48	8.26	2.62	3.15	7.99	2.80	2.85	7.69	2.97	2.59	7.31	3.17	2.31
10				9.89	2.17	4.56	9.51	2.36	4.03	9.19	2.54	3.62	8.90	2.71	3.28	8.60	2.88	2.99	8.26	3.06	2.70	7.84	3.24	2.42
12				10.46	2.25	4.65	10.08	2.44	4.13	9.75	2.62	3.72	9.45	2.79	3.39	9.13	2.95	3.09	8.75	3.13	2.80	8.30	3.31	2.51
14				10.94	2.33	4.70	10.56	2.52	4.19	10.22	2.69	3.80	9.91	2.86	3.47	9.57	3.02	3.17	9.17	3.19	2.87	8.68	3.37	2.58
16				11.14	2.39	4.66	10.83	2.58	4.20	10.56	2.75	3.84	10.28	2.91	3.53	9.97	3.08	3.24	9.59	3.25	2.95	9.11	3.43	2.66
18				11.44	2.45	4.67	11.14	2.63	4.24	10.87	2.80	3.88	10.60	2.97	3.57	10.29	3.13	3.29	9.90	3.29	3.01	9.41	3.47	2.71
20				11.68	2.49	4.69	11.39	2.68	4.25	11.12	2.85	3.90	10.85	3.01	3.60	10.54	3.17	3.32	10.15	3.33	3.05	9.65	3.51	2.75
22				11.87	2.53	4.69	11.58	2.72	4.26	11.32	2.89	3.92	11.05	3.05	3.62	10.74	3.20	3.36	10.35	3.37	3.07	9.84	3.54	2.78
24				12.01	2.56	4.69	11.72	2.75	4.26	11.47	2.92	3.93	11.20	3.08	3.64	10.89	3.23	3.37	10.50	3.39	3.10	9.98	3.57	2.80
26				12.10	2.59	4.67	11.83	2.77	4.27	11.57	2.94	3.94	11.31	3.10	3.65	11.00	3.26	3.37	10.60	3.42	3.10			
28				12.16	2.60	4.68	11.89	2.79	4.26	11.65	2.96	3.94	11.39	3.12	3.65	11.07	3.27	3.39	10.68	3.43	3.11			
30				12.20	2.62	4.66	11.93	2.80	4.26	11.69	2.97	3.94	11.43	3.13	3.65	11.12	3.28	3.39	10.72	3.44	3.12			
32				12.20	2.62	4.66	11.95	2.81	4.25	11.71	2.98	3.93	11.46	3.14	3.65	11.15	3.29	3.39	10.74	3.45	3.11			
34				12.19	2.62	4.65	11.95	2.81	4.25	11.72	2.98	3.93	11.46	3.14	3.65	11.15	3.30	3.38	10.75	3.46	3.11			
36				12.17	2.62	4.65	11.94	2.81	4.25	11.71	2.98	3.93	11.46	3.14	3.65	11.15	3.30	3.38	10.75	3.46	3.11			
38				12.15	2.61	4.66	11.92	2.80	4.26	11.70	2.97	3.94	11.46	3.13	3.66	11.15	3.29	3.39	10.74	3.45	3.11			
40				12.13	2.60	4.67	11.91	2.79	4.27	11.69	2.96	3.95	11.45	3.13	3.66	11.15	3.29	3.39	10.74	3.45	3.11			
42				12.11	2.58	4.69	11.90	2.78	4.28	11.70	2.95	3.97	11.46	3.12	3.67	11.16	3.28	3.40	10.75	3.44	3.13			

**ATTENTION**

For the intermediate points, refer to the operating limits graphics (§ 9.2)

**DATA DECLARED ACCORDING TO UNI EN 14511-2****Key**

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.3. ANK 020 H (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	4.54	1.54	2.95	4.24	1.80	2.36	3.89	2.01	1.94	3.51	2.18	1.61	3.08	2.33	1.32	2.61	2.47	1.06						
-18	4.67	1.54	3.03	4.38	1.81	2.42	4.04	2.02	2.00	3.68	2.19	1.68	3.27	2.34	1.40	2.83	2.49	1.14						
-16	4.82	1.54	3.13	4.54	1.81	2.51	4.22	2.02	2.09	3.87	2.20	1.76	3.48	2.35	1.48	3.06	2.51	1.22						
-14	4.99	1.53	3.26	4.71	1.80	2.62	4.41	2.02	2.18	4.08	2.20	1.85	3.72	2.36	1.58	3.32	2.52	1.32	2.90	2.68	1.08			
-12	5.18	1.52	3.41	4.91	1.80	2.73	4.61	2.02	2.28	4.30	2.20	1.95	3.96	2.36	1.68	3.60	2.52	1.43	3.20	2.69	1.19			
-10	5.37	1.51	3.56	5.11	1.79	2.85	4.83	2.02	2.39	4.54	2.20	2.06	4.22	2.37	1.78	3.88	2.53	1.53	3.52	2.70	1.30	3.14	2.90	1.08
-8	5.56	1.51	3.68	5.31	1.79	2.97	5.05	2.01	2.51	4.78	2.20	2.17	4.49	2.37	1.89	4.18	2.53	1.65	3.85	2.70	1.43	3.50	2.90	1.21
-7	5.66	1.50	3.77	5.42	1.78	3.04	5.09	2.03	2.51	4.90	2.20	2.23	4.67	2.38	1.96	4.33	2.53	1.71	4.02	2.71	1.48	3.69	2.91	1.27
-6	5.76	1.50	3.84	5.52	1.78	3.10	5.28	2.01	2.63	5.02	2.20	2.28	4.75	2.37	2.00	4.48	2.53	1.77	4.18	2.71	1.54	3.87	2.91	1.33
-4	5.96	1.50	3.97	5.73	1.78	3.22	5.50	2.01	2.74	5.26	2.21	2.38	5.02	2.38	2.11	4.77	2.54	1.88	4.51	2.71	1.66	4.24	2.92	1.45
-2	6.14	1.50	4.09	5.93	1.79	3.31	5.71	2.02	2.83	5.50	2.21	2.49	5.29	2.38	2.22	5.07	2.55	1.99	4.84	2.72	1.78	4.61	2.93	1.57
0	6.32	1.51	4.19	6.12	1.80	3.40	5.92	2.03	2.92	5.73	2.22	2.58	5.54	2.39	2.32	5.35	2.56	2.09	5.17	2.73	1.89	4.97	2.94	1.69
1	6.41	1.52	4.22	6.21	1.81	3.43	6.02	2.04	2.95	5.84	2.23	2.62	5.66	2.40	2.36	5.49	2.57	2.14	5.32	2.74	1.94	5.15	2.94	1.75
2				6.51	1.82	3.58	<b>6.15</b>	<b>1.89</b>	<b>3.25</b>	5.96	2.24	2.66	<b>5.76</b>	<b>2.24</b>	<b>2.57</b>	5.63	2.58	2.18	5.46	2.75	1.99	5.24	2.95	1.78
4				7.58	1.84	4.12	7.24	2.07	3.50	6.98	2.27	3.07	6.76	2.44	2.77	6.56	2.60	2.52	6.34	2.77	2.29	6.06	2.98	2.03
6				8.52	1.88	4.53	8.16	2.11	3.87	7.87	2.30	3.42	7.62	2.47	3.09	7.39	2.63	2.81	7.12	2.80	2.54	6.78	3.00	2.26
7				8.94	1.90	4.71	<b>8.67</b>	<b>2.12</b>	<b>4.09</b>	8.27	2.32	3.56	<b>7.98</b>	<b>2.50</b>	<b>3.19</b>	7.76	2.65	2.93	7.47	2.82	2.65	7.11	3.02	2.35
8				9.33	2.00	4.67	8.95	2.19	4.09	8.65	2.37	3.65	8.38	2.53	3.31	8.10	2.70	3.00	7.79	2.87	2.71	7.41	3.06	2.42
10				10.03	2.09	4.80	9.64	2.28	4.23	9.32	2.45	3.80	9.02	2.62	3.44	8.72	2.78	3.14	8.38	2.95	2.84	7.95	3.13	2.54
12				10.61	2.18	4.87	10.22	2.36	4.33	9.89	2.53	3.91	9.58	2.69	3.56	9.25	2.85	3.25	8.88	3.02	2.94	<b>8.41</b>	<b>3.20</b>	<b>2.63</b>
14				11.09	2.25	4.93	10.70	2.43	4.40	10.37	2.60	3.99	10.05	2.76	3.64	9.70	2.92	3.32	9.30	3.08	3.02	<b>8.81</b>	<b>3.26</b>	<b>2.70</b>
16				11.30	2.31	4.89	10.98	2.49	4.41	10.70	2.66	4.02	10.43	2.81	3.71	10.11	2.97	3.40	9.73	3.13	3.11	<b>9.23</b>	<b>3.31</b>	<b>2.79</b>
18				11.60	2.36	4.92	11.29	2.54	4.44	11.02	2.71	4.07	10.74	2.86	3.76	10.43	3.02	3.45	10.04	3.18	3.16	<b>9.54</b>	<b>3.35</b>	<b>2.85</b>
20				11.85	2.41	4.92	11.54	2.59	4.46	11.27	2.75	4.10	11.00	2.90	3.79	10.69	3.06	3.49	10.29	3.22	3.20	<b>9.79</b>	<b>3.39</b>	<b>2.89</b>
22				12.04	2.44	4.93	11.74	2.62	4.48	11.47	2.79	4.11	11.20	2.94	3.81	10.89	3.09	3.52	10.49	3.25	3.23	<b>9.98</b>	<b>3.42</b>	<b>2.92</b>
24				12.18	2.47	4.93	11.89	2.65	4.49	11.63	2.81	4.14	11.36	2.97	3.82	11.04	3.12	3.54	10.64	3.28	3.24	<b>10.12</b>	<b>3.44</b>	<b>2.94</b>
26				12.27	2.50	4.91	11.99	2.67	4.49	11.74	2.84	4.13	11.47	2.99	3.84	11.15	3.14	3.55	10.75	3.30	3.26			
28				12.33	2.51	4.91	12.06	2.69	4.48	11.81	2.85	4.14	11.54	3.01	3.83	11.23	3.16	3.55	10.83	3.31	3.27			
30				12.37	2.53	4.89	12.10	2.70	4.48	11.85	2.87	4.13	11.59	3.02	3.84	11.28	3.17	3.56	10.87	3.32	3.27			
32				12.37	2.53	4.89	12.12	2.71	4.47	11.88	2.87	4.14	11.62	3.03	3.83	11.30	3.18	3.55	10.89	3.33	3.27			
34				12.36	2.53	4.89	12.11	2.71	4.47	11.88	2.88	4.13	11.62	3.03	3.83	11.31	3.18	3.56	10.90	3.34	3.26			
36				12.34	2.53	4.88	12.10	2.71	4.46	11.87	2.87	4.14	11.62	3.03	3.83	11.31	3.18	3.56	10.90	3.34	3.26			
38				12.32	2.52	4.89	12.09	2.70	4.48	11.86	2.87	4.13	11.62	3.03	3.83	11.31	3.18	3.56	10.89	3.33	3.27			
40				12.30	2.51	4.90	12.07	2.69	4.49	11.86	2.86	4.15	11.61	3.02	3.84	11.30	3.17	3.56	10.89	3.33	3.27			
42				12.28	2.49	4.93	12.07	2.68	4.50	11.86	2.85	4.16	11.62	3.01	3.86	11.31	3.16	3.58	10.90	3.32	3.28			




## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.4. ANK 020 HP | HA (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	4.48	1.57	2.85	4.18	1.84	2.27	3.84	2.05	1.87	3.46	2.22	1.56	3.04	2.37	1.28	2.57	2.52	1.02						
-18	4.61	1.57	2.94	4.31	1.84	2.34	3.99	2.06	1.94	3.63	2.23	1.63	3.23	2.39	1.35	2.79	2.54	1.10						
-16	4.76	1.57	3.03	4.47	1.84	2.43	4.16	2.06	2.02	3.81	2.24	1.70	3.44	2.40	1.43	3.02	2.56	1.18						
-14	4.93	1.56	3.16	4.65	1.84	2.53	4.35	2.06	2.11	4.02	2.25	1.79	3.66	2.41	1.52	3.28	2.57	1.28	2.86	2.74	1.04			
-12	5.11	1.55	3.30	4.84	1.83	2.64	4.55	2.06	2.21	4.24	2.25	1.88	3.91	2.41	1.62	3.55	2.57	1.38	3.16	2.75	1.15			
-10	5.29	1.54	3.44	5.04	1.83	2.75	4.76	2.06	2.31	4.47	2.25	1.99	4.16	2.41	1.73	3.83	2.58	1.48	3.47	2.75	1.26	3.09	2.96	1.04
-8	5.49	1.54	3.56	5.24	1.82	2.88	4.98	2.05	2.43	4.71	2.25	2.09	4.42	2.42	1.83	4.12	2.58	1.60	3.80	2.76	1.38	3.45	2.96	1.17
-7	5.59	1.53	3.65	5.34	1.82	2.93	4.98	2.09	2.38	4.83	2.25	2.15	4.57	2.44	1.87	4.27	2.58	1.66	3.96	2.76	1.43	3.64	2.97	1.23
-6	5.68	1.53	3.71	5.45	1.82	2.99	5.20	2.05	2.54	4.95	2.25	2.20	4.69	2.42	1.94	4.41	2.58	1.71	4.12	2.76	1.49	3.82	2.97	1.29
-4	5.87	1.53	3.84	5.65	1.82	3.10	5.42	2.05	2.64	5.19	2.25	2.31	4.95	2.42	2.05	4.71	2.59	1.82	4.45	2.77	1.61	4.19	2.98	1.41
-2	6.06	1.53	3.96	5.85	1.82	3.21	5.63	2.06	2.73	5.42	2.26	2.40	5.21	2.43	2.14	5.00	2.60	1.92	4.78	2.78	1.72	4.55	2.98	1.53
0	6.23	1.54	4.05	6.03	1.84	3.28	5.84	2.07	2.82	5.65	2.27	2.49	5.46	2.44	2.24	5.28	2.61	2.02	5.09	2.79	1.82	4.91	3.00	1.64
1	6.32	1.55	4.08	6.12	1.84	3.33	5.94	2.08	2.86	5.76	2.28	2.53	5.59	2.45	2.28	5.42	2.62	2.07	5.25	2.80	1.88	5.08	3.00	1.69
2				6.42	1.85	3.47	<b>6.05</b>	<b>1.94</b>	<b>3.12</b>	5.88	2.29	2.57	<b>5.68</b>	<b>2.28</b>	<b>2.49</b>	5.55	2.63	2.11	5.38	2.81	1.91	5.16	3.01	1.71
4				7.48	1.88	3.98	7.14	2.11	3.38	6.88	2.31	2.98	6.67	2.48	2.69	6.47	2.65	2.44	6.25	2.83	2.21	5.98	3.03	1.97
6				8.40	1.91	4.40	8.04	2.15	3.74	7.76	2.35	3.30	7.52	2.52	2.98	7.28	2.68	2.72	7.02	2.86	2.45	6.69	3.06	2.19
7				8.82	1.94	4.55	<b>8.58</b>	<b>2.18</b>	<b>3.94</b>	8.16	2.37	3.44	<b>7.87</b>	<b>2.55</b>	<b>3.09</b>	7.65	2.70	2.83	7.36	2.88	2.56	7.01	3.08	2.28
8				9.20	2.04	4.51	8.83	2.24	3.94	8.53	2.41	3.54	8.26	2.58	3.20	7.99	2.75	2.91	7.69	2.93	2.62	7.31	3.12	2.34
10				9.89	2.14	4.62	9.51	2.33	4.08	9.19	2.50	3.68	8.90	2.67	3.33	8.60	2.84	3.03	8.26	3.01	2.74	7.84	3.19	2.46
12				10.46	2.22	4.71	10.08	2.41	4.18	9.75	2.58	3.78	9.45	2.74	3.45	9.13	2.91	3.14	8.75	3.08	2.84	8.30	3.26	2.55
14				10.94	2.29	4.78	10.56	2.48	4.26	10.22	2.65	3.86	9.91	2.81	3.53	9.57	2.97	3.22	9.17	3.14	2.92	8.68	3.32	2.61
16				11.14	2.35	4.74	10.83	2.54	4.26	10.56	2.71	3.90	10.28	2.87	3.58	9.97	3.03	3.29	9.59	3.20	3.00	9.11	3.37	2.70
18				11.44	2.41	4.75	11.14	2.59	4.30	10.87	2.76	3.94	10.60	2.92	3.63	10.29	3.08	3.34	9.90	3.24	3.06	9.41	3.42	2.75
20				11.68	2.45	4.77	11.39	2.64	4.31	11.12	2.80	3.97	10.85	2.96	3.67	10.54	3.12	3.38	10.15	3.28	3.09	9.65	3.45	2.80
22				11.87	2.49	4.77	11.58	2.67	4.34	11.32	2.84	3.99	11.05	3.00	3.68	10.74	3.15	3.41	10.35	3.31	3.13	9.84	3.49	2.82
24				12.01	2.52	4.77	11.72	2.70	4.34	11.47	2.87	4.00	11.20	3.03	3.70	10.89	3.18	3.42	10.50	3.34	3.14	9.98	3.51	2.84
26				12.10	2.55	4.75	11.83	2.73	4.33	11.57	2.89	4.00	11.31	3.05	3.71	11.00	3.20	3.44	10.60	3.36	3.15			
28				12.16	2.56	4.75	11.89	2.75	4.32	11.65	2.91	4.00	11.39	3.07	3.71	11.07	3.22	3.44	10.68	3.38	3.16			
30				12.20	2.58	4.73	11.93	2.76	4.32	11.69	2.92	4.00	11.43	3.08	3.71	11.12	3.23	3.44	10.72	3.39	3.16			
32				12.20	2.58	4.73	11.95	2.76	4.33	11.71	2.93	4.00	11.46	3.09	3.71	11.15	3.24	3.44	10.74	3.40	3.16			
34				12.19	2.58	4.72	11.95	2.77	4.31	11.72	2.93	4.00	11.46	3.09	3.71	11.15	3.24	3.44	10.75	3.40	3.16			
36				12.17	2.58	4.72	11.94	2.76	4.33	11.71	2.93	4.00	11.46	3.09	3.71	11.15	3.24	3.44	10.75	3.40	3.16			
38				12.15	2.57	4.73	11.92	2.76	4.32	11.70	2.93	3.99	11.46	3.09	3.71	11.15	3.24	3.44	10.74	3.40	3.16			
40				12.13	2.56	4.74	11.91	2.75	4.33	11.69	2.92	4.00	11.45	3.08	3.72	11.15	3.24	3.44	10.74	3.39	3.17			
42				12.11	2.54	4.77	11.90	2.73	4.36	11.70	2.91	4.02	11.46	3.07	3.73	11.16	3.23	3.46	10.75	3.39	3.17			


HEATING MODE

COOLING MODE

**ATTENTION**

For the intermediate points, refer to the operating limits graphics (§ 9.2)

**DATA DECLARED ACCORDING TO UNI EN 14511-2****Key**

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



$\Delta T$ WATER DIFFERENT TO NOMINAL ( $\Delta T$ 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.5. ANK 030 H (230V/1/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	5.79	1.97	2.94	5.38	2.29	2.35	4.92	2.53	1.94	4.40	2.72	1.62	3.84	2.89	1.33	3.25	3.07	1.06						
-18	5.97	1.98	3.02	5.60	2.29	2.45	5.17	2.54	2.04	4.70	2.74	1.72	4.17	2.92	1.43	3.61	3.09	1.17						
-16	6.12	1.97	3.11	5.78	2.29	2.52	5.39	2.55	2.11	4.95	2.75	1.80	4.46	2.93	1.52	3.94	3.11	1.27						
-14	6.24	1.96	3.18	5.95	2.29	2.60	5.59	2.55	2.19	5.18	2.76	1.88	4.73	2.94	1.61	4.24	3.12	1.36	3.71	3.33	1.11			
-12	6.36	1.95	3.26	6.10	2.29	2.66	5.78	2.55	2.27	5.41	2.76	1.96	4.99	2.95	1.69	4.53	3.13	1.45	4.04	3.34	1.21			
-10	6.50	1.94	3.35	6.27	2.28	2.75	5.98	2.54	2.35	5.64	2.76	2.04	5.26	2.95	1.78	4.83	3.14	1.54	4.37	3.35	1.30	3.88	3.60	1.08
-8	6.65	1.92	3.46	6.46	2.27	2.85	6.21	2.54	2.44	5.90	2.76	2.14	5.55	2.95	1.88	5.15	3.14	1.64	4.72	3.35	1.41	4.26	3.61	1.18
-7	6.75	1.92	3.52	6.57	2.27	2.89	6.31	2.57	2.46	6.04	2.76	2.19	5.68	2.96	1.92	5.32	3.15	1.69	4.91	3.36	1.46	4.46	3.61	1.24
-6	6.85	1.91	3.59	6.69	2.26	2.96	6.47	2.54	2.55	6.19	2.76	2.24	5.87	2.96	1.98	5.51	3.15	1.75	5.11	3.36	1.52	4.68	3.62	1.29
-4	7.10	1.90	3.74	6.97	2.26	3.08	6.78	2.54	2.67	6.54	2.76	2.37	6.25	2.96	2.11	5.91	3.16	1.87	5.54	3.37	1.64	5.14	3.63	1.42
-2	7.42	1.90	3.91	7.32	2.26	3.24	7.16	2.54	2.82	6.95	2.77	2.51	6.69	2.97	2.25	6.38	3.16	2.02	6.04	3.38	1.79	5.67	3.64	1.56
0	7.82	1.90	4.12	7.76	2.26	3.43	7.63	2.55	2.99	7.44	2.78	2.68	7.21	2.98	2.42	6.93	3.18	2.18	6.62	3.39	1.95	6.28	3.65	1.72
1	8.06	1.90	4.24	8.01	2.27	3.53	7.89	2.55	3.09	7.72	2.79	2.77	7.51	2.99	2.51	7.24	3.19	2.27	6.94	3.40	2.04	6.61	3.66	1.81
2				8.47	2.27	3.73	8.18	2.54	3.22	8.11	2.79	2.91	7.88	3.01	2.62	7.59	3.20	2.37	7.23	3.41	2.12	6.79	3.67	1.85
4				9.46	2.29	4.13	9.25	2.58	3.59	9.01	2.82	3.20	8.73	3.02	2.89	8.40	3.22	2.61	7.99	3.44	2.32	7.49	3.70	2.02
6				10.41	2.32	4.49	10.17	2.61	3.90	9.90	2.85	3.47	9.58	3.06	3.13	9.20	3.26	2.82	8.75	3.47	2.52	8.20	3.73	2.20
7				10.88	2.34	4.65	10.92	2.64	4.14	10.33	2.87	3.60	10.05	3.11	3.23	9.60	3.28	2.93	9.12	3.50	2.61	8.56	3.75	2.28
8				11.33	2.46	4.61	11.06	2.71	4.08	10.76	2.93	3.67	10.41	3.14	3.32	9.99	3.34	2.99	9.50	3.56	2.67	8.91	3.79	2.35
10				12.20	2.58	4.73	11.91	2.83	4.21	11.58	3.05	3.80	11.21	3.25	3.45	10.76	3.45	3.12	10.23	3.66	2.80	9.61	3.89	2.47
12				13.01	2.68	4.85	12.70	2.93	4.33	12.36	3.14	3.94	11.96	3.34	3.58	11.49	3.54	3.25	10.93	3.75	2.91	10.28	3.98	2.58
14				13.73	2.77	4.96	13.42	3.02	4.44	13.06	3.23	4.04	12.65	3.43	3.69	12.16	3.62	3.36	11.59	3.83	3.03	10.91	4.05	2.69
16				14.12	2.85	4.95	13.86	3.09	4.49	13.55	3.31	4.09	13.18	3.50	3.77	12.74	3.69	3.45	12.21	3.89	3.14	11.59	4.12	2.81
18				14.49	2.92	4.96	14.24	3.16	4.51	13.95	3.37	4.14	13.59	3.57	3.81	13.16	3.75	3.51	12.64	3.95	3.20	12.02	4.17	2.88
20				14.78	2.98	4.96	14.54	3.22	4.52	14.26	3.43	4.16	13.91	3.62	3.84	13.49	3.81	3.54	12.98	4.00	3.25	12.36	4.22	2.93
22				14.99	3.02	4.96	14.77	3.26	4.53	14.50	3.47	4.18	14.16	3.66	3.87	13.75	3.85	3.57	13.24	4.04	3.28	12.62	4.26	2.96
24				15.15	3.06	4.95	14.94	3.30	4.53	14.68	3.51	4.18	14.35	3.70	3.88	13.94	3.88	3.59	13.43	4.07	3.30	12.82	4.29	2.99
26				15.26	3.09	4.94	15.06	3.33	4.52	14.80	3.53	4.19	14.48	3.72	3.89	14.07	3.91	3.60	13.56	4.10	3.31			
28				15.32	3.11	4.93	15.13	3.35	4.52	14.88	3.56	4.18	14.56	3.74	3.89	14.15	3.93	3.60	13.65	4.12	3.31			
30				15.35	3.12	4.92	15.17	3.36	4.51	14.92	3.57	4.18	14.61	3.76	3.89	14.20	3.94	3.60	13.70	4.13	3.32			
32				15.36	3.13	4.91	15.18	3.37	4.50	14.94	3.58	4.17	14.62	3.77	3.88	14.22	3.95	3.60	13.72	4.14	3.31			
34				15.35	3.13	4.90	15.18	3.37	4.50	14.94	3.58	4.17	14.63	3.77	3.88	14.22	3.95	3.60	13.71	4.14	3.31			
36				15.34	3.12	4.92	15.17	3.37	4.50	14.93	3.58	4.17	14.62	3.77	3.88	14.21	3.95	3.60	13.70	4.14	3.31			
38				15.33	3.11	4.93	15.17	3.36	4.51	14.93	3.57	4.18	14.61	3.76	3.89	14.20	3.95	3.59	13.68	4.14	3.30			
40				15.34	3.10	4.95	15.18	3.35	4.53	14.94	3.56	4.20	14.62	3.76	3.89	14.20	3.94	3.60	13.68	4.14	3.30			
42				15.37	3.08	4.99	15.21	3.33	4.57	14.97	3.55	4.22	14.65	3.75	3.91	14.22	3.93	3.62	13.69	4.13	3.31			



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Ph	Heating capacity (kW)
Pe	Input power (kW)
ATTENTION operation with DCPX	
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96



## 10.6. ANK 030 HP|HA (230V/1/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	5.71	2.00	2.86	5.31	2.32	2.29	4.85	2.56	1.89	4.34	2.76	1.57	3.79	2.93	1.29	3.20	3.11	1.03						
-18	5.89	2.00	2.95	5.52	2.32	2.38	5.10	2.57	1.98	4.63	2.78	1.67	4.11	2.95	1.39	3.56	3.13	1.14						
-16	6.03	2.00	3.02	5.70	2.32	2.46	5.32	2.58	2.06	4.88	2.79	1.75	4.40	2.97	1.48	3.88	3.15	1.23						
-14	6.16	1.99	3.10	5.86	2.32	2.53	5.51	2.58	2.14	5.11	2.79	1.83	4.66	2.98	1.56	4.18	3.16	1.32	3.66	3.37	1.09			
-12	6.28	1.98	3.17	6.02	2.31	2.61	5.70	2.58	2.21	5.33	2.80	1.90	4.92	2.99	1.65	4.47	3.17	1.41	3.98	3.38	1.18			
-10	6.41	1.96	3.27	6.18	2.31	2.68	5.90	2.58	2.29	5.56	2.80	1.99	5.18	2.99	1.73	4.76	3.18	1.50	4.31	3.39	1.27	3.82	3.65	1.05
-8	6.56	1.95	3.36	6.37	2.30	2.77	6.12	2.57	2.38	5.82	2.80	2.08	5.47	2.99	1.83	5.08	3.18	1.60	4.65	3.40	1.37	4.20	3.66	1.15
-7	6.65	1.94	3.43	6.48	2.29	2.83	6.18	2.61	2.37	5.96	2.80	2.13	5.54	3.00	1.85	5.25	3.19	1.65	4.84	3.40	1.42	4.40	3.66	1.20
-6	6.75	1.94	3.48	6.59	2.29	2.88	6.38	2.57	2.48	6.11	2.80	2.18	5.79	2.99	1.94	5.43	3.19	1.70	5.04	3.40	1.48	4.61	3.66	1.26
-4	7.00	1.93	3.63	6.87	2.29	3.00	6.69	2.57	2.60	6.45	2.80	2.30	6.16	3.00	2.05	5.83	3.20	1.82	5.47	3.41	1.60	5.07	3.67	1.38
-2	7.32	1.92	3.81	7.22	2.29	3.15	7.06	2.57	2.75	6.85	2.80	2.45	6.59	3.01	2.19	6.29	3.21	1.96	5.96	3.42	1.74	5.59	3.68	1.52
0	7.72	1.92	4.02	7.65	2.29	3.34	7.52	2.58	2.91	7.34	2.81	2.61	7.11	3.02	2.35	6.84	3.22	2.12	6.53	3.44	1.90	6.19	3.70	1.67
1	7.95	1.93	4.12	7.90	2.29	3.45	7.78	2.58	3.02	7.62	2.82	2.70	7.40	3.03	2.44	7.14	3.23	2.21	6.85	3.45	1.99	6.52	3.71	1.76
2				8.35	2.30	3.63	<b>8.04</b>	<b>2.58</b>	<b>3.12</b>	8.00	2.83	2.83	<b>7.77</b>	<b>3.04</b>	<b>2.56</b>	7.48	3.24	2.31	7.13	3.46	2.06	6.70	3.72	1.80
4				9.32	2.32	4.02	9.12	2.61	3.49	8.89	2.85	3.12	8.61	3.06	2.81	8.28	3.27	2.53	7.88	3.48	2.26	7.39	3.75	1.97
6				10.27	2.35	4.37	10.03	2.65	3.78	9.76	2.89	3.38	9.45	3.10	3.05	9.07	3.30	2.75	8.62	3.52	2.45	8.09	3.78	2.14
7				10.73	2.37	4.53	<b>10.84</b>	<b>2.64</b>	<b>4.11</b>	10.19	2.91	3.50	<b>9.91</b>	<b>3.15</b>	<b>3.15</b>	9.47	3.32	2.85	9.00	3.54	2.54	8.44	3.80	2.22
8				11.18	2.49	4.49	10.91	2.75	3.97	10.61	2.97	3.57	10.26	3.18	3.23	9.85	3.39	2.91	9.37	3.60	2.60	8.79	3.84	2.29
10				12.03	2.61	4.61	11.75	2.86	4.11	11.42	3.08	3.71	11.05	3.29	3.36	10.61	3.49	3.04	10.09	3.71	2.72	9.47	3.94	2.40
12				12.82	2.72	4.71	12.52	2.97	4.22	12.18	3.19	3.82	11.79	3.39	3.48	11.33	3.59	3.16	10.78	3.80	2.84	10.14	4.03	2.52
14				13.54	2.81	4.82	13.23	3.06	4.32	12.88	3.27	3.94	12.47	3.47	3.59	11.99	3.67	3.27	11.43	3.88	2.95	10.76	4.10	2.62
16				13.92	2.89	4.82	13.66	3.13	4.36	13.36	3.35	3.99	13.00	3.55	3.66	12.56	3.74	3.36	12.04	3.94	3.06	11.43	4.17	2.74
18				14.28	2.96	4.82	14.04	3.20	4.39	13.75	3.41	4.03	13.40	3.61	3.71	12.97	3.80	3.41	12.46	4.00	3.12	11.85	4.23	2.80
20				14.57	3.01	4.84	14.34	3.26	4.40	14.06	3.47	4.05	13.72	3.66	3.75	13.30	3.85	3.45	12.79	4.05	3.16	12.19	4.27	2.85
22				14.79	3.06	4.83	14.57	3.30	4.42	14.30	3.52	4.06	13.97	3.71	3.77	13.55	3.90	3.47	13.05	4.09	3.19	12.45	4.31	2.89
24				14.94	3.10	4.82	14.73	3.34	4.41	14.47	3.55	4.08	14.15	3.74	3.78	13.74	3.93	3.50	13.24	4.13	3.21	12.64	4.34	2.91
26				15.05	3.13	4.81	14.85	3.37	4.41	14.60	3.58	4.08	14.27	3.77	3.79	13.87	3.96	3.50	13.38	4.15	3.22			
28				15.11	3.15	4.80	14.92	3.39	4.40	14.67	3.60	4.08	14.36	3.79	3.79	13.96	3.98	3.51	13.46	4.17	3.23			
30				15.14	3.16	4.79	14.96	3.40	4.40	14.72	3.62	4.07	14.40	3.81	3.78	14.00	3.99	3.51	13.51	4.18	3.23			
32				15.14	3.17	4.78	14.97	3.41	4.39	14.73	3.62	4.07	14.42	3.81	3.78	14.02	4.00	3.51	13.52	4.19	3.23			
34				15.14	3.17	4.78	14.97	3.41	4.39	14.73	3.63	4.06	14.42	3.82	3.77	14.02	4.00	3.51	13.52	4.20	3.22			
36				15.13	3.16	4.79	14.96	3.41	4.39	14.73	3.62	4.07	14.42	3.82	3.77	14.01	4.00	3.50	13.51	4.20	3.22			
38				15.12	3.15	4.80	14.95	3.40	4.40	14.72	3.62	4.07	14.41	3.81	3.78	14.01	4.00	3.50	13.49	4.19	3.22			
40				15.13	3.14	4.82	14.96	3.39	4.41	14.73	3.61	4.08	14.42	3.80	3.79	14.01	3.99	3.51	13.49	4.19	3.22			
42				15.16	3.12	4.86	15.00	3.37	4.45	14.76	3.59	4.11	14.44	3.79	3.81	14.03	3.98	3.53	13.50	4.18	3.23			

HEATING MODE

COOLING MODE

**ATTENTION**

For the intermediate points, refer to the operating limits graphics (§ 9.2)

**DATA DECLARED ACCORDING TO UNI EN 14511-2****Key**

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.7. ANK 030 H (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	5.79	1.97	2.94	5.38	2.29	2.35	4.92	2.53	1.94	4.40	2.72	1.62	3.84	2.89	1.33	3.25	3.07	1.06						
-18	5.97	1.98	3.02	5.60	2.29	2.45	5.17	2.54	2.04	4.70	2.74	1.72	4.17	2.92	1.43	3.61	3.09	1.17						
-16	6.12	1.97	3.11	5.78	2.29	2.52	5.39	2.55	2.11	4.95	2.75	1.80	4.46	2.93	1.52	3.94	3.11	1.27						
-14	6.24	1.96	3.18	5.95	2.29	2.60	5.59	2.55	2.19	5.18	2.76	1.88	4.73	2.94	1.61	4.24	3.12	1.36	3.71	3.33	1.11			
-12	6.36	1.95	3.26	6.10	2.29	2.66	5.78	2.55	2.27	5.41	2.76	1.96	4.99	2.95	1.69	4.53	3.13	1.45	4.04	3.34	1.21			
-10	6.50	1.94	3.35	6.27	2.28	2.75	5.98	2.54	2.35	5.64	2.76	2.04	5.26	2.95	1.78	4.83	3.14	1.54	4.37	3.35	1.30	3.88	3.60	1.08
-8	6.65	1.92	3.46	6.46	2.27	2.85	6.21	2.54	2.44	5.90	2.76	2.14	5.55	2.95	1.88	5.15	3.14	1.64	4.72	3.35	1.41	4.26	3.61	1.18
-7	6.75	1.92	3.52	6.57	2.27	2.89	6.31	2.57	2.46	6.04	2.76	2.19	5.68	2.96	1.92	5.32	3.15	1.69	4.91	3.36	1.46	4.46	3.61	1.24
-6	6.85	1.91	3.59	6.69	2.26	2.96	6.47	2.54	2.55	6.19	2.76	2.24	5.87	2.96	1.98	5.51	3.15	1.75	5.11	3.36	1.52	4.68	3.62	1.29
-4	7.10	1.90	3.74	6.97	2.26	3.08	6.78	2.54	2.67	6.54	2.76	2.37	6.25	2.96	2.11	5.91	3.16	1.87	5.54	3.37	1.64	5.14	3.63	1.42
-2	7.42	1.90	3.91	7.32	2.26	3.24	7.16	2.54	2.82	6.95	2.77	2.51	6.69	2.97	2.25	6.38	3.16	2.02	6.04	3.38	1.79	5.67	3.64	1.56
0	7.82	1.90	4.12	7.76	2.26	3.43	7.63	2.55	2.99	7.44	2.78	2.68	7.21	2.98	2.42	6.93	3.18	2.18	6.62	3.39	1.95	6.28	3.65	1.72
1	8.06	1.90	4.24	8.01	2.27	3.53	7.89	2.55	3.09	7.72	2.79	2.77	7.51	2.99	2.51	7.24	3.19	2.27	6.94	3.40	2.04	6.61	3.66	1.81
2				8.47	2.27	3.73	8.18	2.54	3.22	8.11	2.79	2.91	7.88	3.01	2.62	7.59	3.20	2.37	7.23	3.41	2.12	6.79	3.67	1.85
4				9.46	2.29	4.13	9.25	2.58	3.59	9.01	2.82	3.20	8.73	3.02	2.89	8.40	3.22	2.61	7.99	3.44	2.32	7.49	3.70	2.02
6				10.41	2.32	4.49	10.17	2.61	3.90	9.90	2.85	3.47	9.58	3.06	3.13	9.20	3.26	2.82	8.75	3.47	2.52	8.20	3.73	2.20
7				10.88	2.34	4.65	10.92	2.64	4.14	10.33	2.87	3.60	10.05	3.11	3.23	9.60	3.28	2.93	9.12	3.50	2.61	8.56	3.75	2.28
8				11.33	2.46	4.61	11.06	2.71	4.08	10.76	2.93	3.67	10.41	3.14	3.32	9.99	3.34	2.99	9.50	3.56	2.67	8.91	3.79	2.35
10				12.20	2.58	4.73	11.91	2.83	4.21	11.58	3.05	3.80	11.21	3.25	3.45	10.76	3.45	3.12	10.23	3.66	2.80	9.61	3.89	2.47
12				13.01	2.68	4.85	12.70	2.93	4.33	12.36	3.14	3.94	11.96	3.34	3.58	11.49	3.54	3.25	10.93	3.75	2.91	10.28	3.98	2.58
14				13.73	2.77	4.96	13.42	3.02	4.44	13.06	3.23	4.04	12.65	3.43	3.69	12.16	3.62	3.36	11.59	3.83	3.03	10.91	4.05	2.69
16				14.12	2.85	4.95	13.86	3.09	4.49	13.55	3.31	4.09	13.18	3.50	3.77	12.74	3.69	3.45	12.21	3.89	3.14	11.59	4.12	2.81
18				14.49	2.92	4.96	14.24	3.16	4.51	13.95	3.37	4.14	13.59	3.57	3.81	13.16	3.75	3.51	12.64	3.95	3.20	12.02	4.17	2.88
20				14.78	2.98	4.96	14.54	3.22	4.52	14.26	3.43	4.16	13.91	3.62	3.84	13.49	3.81	3.54	12.98	4.00	3.25	12.36	4.22	2.93
22				14.99	3.02	4.96	14.77	3.26	4.53	14.50	3.47	4.18	14.16	3.66	3.87	13.75	3.85	3.57	13.24	4.04	3.28	12.62	4.26	2.96
24				15.15	3.06	4.95	14.94	3.30	4.53	14.68	3.51	4.18	14.35	3.70	3.88	13.94	3.88	3.59	13.43	4.07	3.30	12.82	4.29	2.99
26				15.26	3.09	4.94	15.06	3.33	4.52	14.80	3.53	4.19	14.48	3.72	3.89	14.07	3.91	3.60	13.56	4.10	3.31			
28				15.32	3.11	4.93	15.13	3.35	4.52	14.88	3.56	4.18	14.56	3.74	3.89	14.15	3.93	3.60	13.65	4.12	3.31			
30				15.35	3.12	4.92	15.17	3.36	4.51	14.92	3.57	4.18	14.61	3.76	3.89	14.20	3.94	3.60	13.70	4.13	3.32			
32				15.36	3.13	4.91	15.18	3.37	4.50	14.94	3.58	4.17	14.62	3.77	3.88	14.22	3.95	3.60	13.72	4.14	3.31			
34				15.35	3.13	4.90	15.18	3.37	4.50	14.94	3.58	4.17	14.63	3.77	3.88	14.22	3.95	3.60	13.71	4.14	3.31			
36				15.34	3.12	4.92	15.17	3.37	4.50	14.93	3.58	4.17	14.62	3.77	3.88	14.21	3.95	3.60	13.70	4.14	3.31			
38				15.33	3.11	4.93	15.17	3.36	4.51	14.93	3.57	4.18	14.61	3.76	3.89	14.20	3.95	3.59	13.68	4.14	3.30			
40				15.34	3.10	4.95	15.18	3.35	4.53	14.94	3.56	4.20	14.62	3.76	3.89	14.20	3.94	3.60	13.68	4.14	3.30			
42				15.37	3.08	4.99	15.21	3.33	4.57	14.97	3.55	4.22	14.65	3.75	3.91	14.22	3.93	3.62	13.69	4.13	3.31			



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.8. ANK 030 HP | HA (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	5.71	2.00	2.86	5.31	2.32	2.29	4.85	2.56	1.89	4.34	2.76	1.57	3.79	2.93	1.29	3.20	3.11	1.03						
-18	5.89	2.00	2.95	5.52	2.32	2.38	5.10	2.57	1.98	4.63	2.78	1.67	4.11	2.95	1.39	3.56	3.13	1.14						
-16	6.03	2.00	3.02	5.70	2.32	2.46	5.32	2.58	2.06	4.88	2.79	1.75	4.40	2.97	1.48	3.88	3.15	1.23						
-14	6.16	1.99	3.10	5.86	2.32	2.53	5.51	2.58	2.14	5.11	2.79	1.83	4.66	2.98	1.56	4.18	3.16	1.32	3.66	3.37	1.09			
-12	6.28	1.98	3.17	6.02	2.31	2.61	5.70	2.58	2.21	5.33	2.80	1.90	4.92	2.99	1.65	4.47	3.17	1.41	3.98	3.38	1.18			
-10	6.41	1.96	3.27	6.18	2.31	2.68	5.90	2.58	2.29	5.56	2.80	1.99	5.18	2.99	1.73	4.76	3.18	1.50	4.31	3.39	1.27	3.82	3.65	1.05
-8	6.56	1.95	3.36	6.37	2.30	2.77	6.12	2.57	2.38	5.82	2.80	2.08	5.47	2.99	1.83	5.08	3.18	1.60	4.65	3.40	1.37	4.20	3.66	1.15
-7	6.65	1.94	3.43	6.48	2.29	2.83	6.18	2.61	2.37	5.96	2.80	2.13	5.54	3.00	1.85	5.25	3.19	1.65	4.84	3.40	1.42	4.40	3.66	1.20
-6	6.75	1.94	3.48	6.59	2.29	2.88	6.38	2.57	2.48	6.11	2.80	2.18	5.79	2.99	1.94	5.43	3.19	1.70	5.04	3.40	1.48	4.61	3.66	1.26
-4	7.00	1.93	3.63	6.87	2.29	3.00	6.69	2.57	2.60	6.45	2.80	2.30	6.16	3.00	2.05	5.83	3.20	1.82	5.47	3.41	1.60	5.07	3.67	1.38
-2	7.32	1.92	3.81	7.22	2.29	3.15	7.06	2.57	2.75	6.85	2.80	2.45	6.59	3.01	2.19	6.29	3.21	1.96	5.96	3.42	1.74	5.59	3.68	1.52
0	7.72	1.92	4.02	7.65	2.29	3.34	7.52	2.58	2.91	7.34	2.81	2.61	7.11	3.02	2.35	6.84	3.22	2.12	6.53	3.44	1.90	6.19	3.70	1.67
1	7.95	1.93	4.12	7.90	2.29	3.45	7.78	2.58	3.02	7.62	2.82	2.70	7.40	3.03	2.44	7.14	3.23	2.21	6.85	3.45	1.99	6.52	3.71	1.76
2				8.35	2.30	3.63	<b>8.04</b>	<b>2.58</b>	<b>3.12</b>	8.00	2.83	2.83	<b>7.77</b>	<b>3.04</b>	<b>2.56</b>	7.48	3.24	2.31	7.13	3.46	2.06	6.70	3.72	1.80
4				9.32	2.32	4.02	9.12	2.61	3.49	8.89	2.85	3.12	8.61	3.06	2.81	8.28	3.27	2.53	7.88	3.48	2.26	7.39	3.75	1.97
6				10.27	2.35	4.37	10.03	2.65	3.78	9.76	2.89	3.38	9.45	3.10	3.05	9.07	3.30	2.75	8.62	3.52	2.45	8.09	3.78	2.14
7				10.73	2.37	4.53	<b>10.84</b>	<b>2.64</b>	<b>4.11</b>	10.19	2.91	3.50	<b>9.91</b>	<b>3.15</b>	<b>3.15</b>	9.47	3.32	2.85	9.00	3.54	2.54	8.44	3.80	2.22
8				11.18	2.49	4.49	10.91	2.75	3.97	10.61	2.97	3.57	10.26	3.18	3.23	9.85	3.39	2.91	9.37	3.60	2.60	8.79	3.84	2.29
10				12.03	2.61	4.61	11.75	2.86	4.11	11.42	3.08	3.71	11.05	3.29	3.36	10.61	3.49	3.04	10.09	3.71	2.72	9.47	3.94	2.40
12				12.82	2.72	4.71	12.52	2.97	4.22	12.18	3.19	3.82	11.79	3.39	3.48	11.33	3.59	3.16	10.78	3.80	2.84	10.14	4.03	2.52
14				13.54	2.81	4.82	13.23	3.06	4.32	12.88	3.27	3.94	12.47	3.47	3.59	11.99	3.67	3.27	11.43	3.88	2.95	10.76	4.10	2.62
16				13.92	2.89	4.82	13.66	3.13	4.36	13.36	3.35	3.99	13.00	3.55	3.66	12.56	3.74	3.36	12.04	3.94	3.06	11.43	4.17	2.74
18				14.28	2.96	4.82	14.04	3.20	4.39	13.75	3.41	4.03	13.40	3.61	3.71	12.97	3.80	3.41	12.46	4.00	3.12	11.85	4.23	2.80
20				14.57	3.01	4.84	14.34	3.26	4.40	14.06	3.47	4.05	13.72	3.66	3.75	13.30	3.85	3.45	12.79	4.05	3.16	12.19	4.27	2.85
22				14.79	3.06	4.83	14.57	3.30	4.42	14.30	3.52	4.06	13.97	3.71	3.77	13.55	3.90	3.47	13.05	4.09	3.19	12.45	4.31	2.89
24				14.94	3.10	4.82	14.73	3.34	4.41	14.47	3.55	4.08	14.15	3.74	3.78	13.74	3.93	3.50	13.24	4.13	3.21	12.64	4.34	2.91
26				15.05	3.13	4.81	14.85	3.37	4.41	14.60	3.58	4.08	14.27	3.77	3.79	13.87	3.96	3.50	13.38	4.15	3.22			
28				15.11	3.15	4.80	14.92	3.39	4.40	14.67	3.60	4.08	14.36	3.79	3.79	13.96	3.98	3.51	13.46	4.17	3.23			
30				15.14	3.16	4.79	14.96	3.40	4.40	14.72	3.62	4.07	14.40	3.81	3.78	14.00	3.99	3.51	13.51	4.18	3.23			
32				15.14	3.17	4.78	14.97	3.41	4.39	14.73	3.62	4.07	14.42	3.81	3.78	14.02	4.00	3.51	13.52	4.19	3.23			
34				15.14	3.17	4.78	14.97	3.41	4.39	14.73	3.63	4.06	14.42	3.82	3.77	14.02	4.00	3.51	13.52	4.20	3.22			
36				15.13	3.16	4.79	14.96	3.41	4.39	14.73	3.62	4.07	14.42	3.82	3.77	14.01	4.00	3.50	13.51	4.20	3.22			
38				15.12	3.15	4.80	14.95	3.40	4.40	14.72	3.62	4.07	14.41	3.81	3.78	14.01	4.00	3.50	13.49	4.19	3.22			
40				15.13	3.14	4.82	14.96	3.39	4.41	14.73	3.61	4.08	14.42	3.80	3.79	14.01	3.99	3.51	13.49	4.19	3.22			
42				15.16	3.12	4.86	15.00	3.37	4.45	14.76	3.59	4.11	14.44	3.79	3.81	14.03	3.98	3.53	13.50	4.18	3.23			


HEATING MODE

COOLING MODE

**ATTENTION**

For the intermediate points, refer to the operating limits graphics (§ 9.2)

**DATA DECLARED ACCORDING TO UNI EN 14511-2****Key**

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



$\Delta T$ WATER DIFFERENT TO NOMINAL ( $\Delta T$ 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.9. ANK 040 H (230V/1/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	6.03	2.27	2.66	5.69	2.58	2.21	5.26	2.83	1.86	4.76	3.03	1.57	4.19	3.23	1.30	3.56	3.42	1.04						
-18	6.32	2.27	2.78	5.98	2.59	2.31	5.57	2.84	1.96	5.08	3.06	1.66	4.53	3.26	1.39	3.92	3.46	1.13						
-16	6.57	2.26	2.91	6.24	2.59	2.41	5.84	2.85	2.05	5.37	3.08	1.74	4.84	3.28	1.48	4.26	3.49	1.22						
-14	6.80	2.24	3.04	6.48	2.58	2.51	6.09	2.85	2.14	5.64	3.08	1.83	5.14	3.30	1.56	4.57	3.51	1.30	3.97	3.73	1.06			
-12	7.02	2.21	3.18	6.71	2.56	2.62	6.34	2.84	2.23	5.91	3.08	1.92	5.42	3.30	1.64	4.89	3.52	1.39	4.31	3.75	1.15			
-10	7.23	2.18	3.32	6.94	2.54	2.73	6.58	2.83	2.33	6.17	3.08	2.00	5.71	3.30	1.73	5.21	3.52	1.48	4.66	3.76	1.24	4.08	4.03	1.01
-8	7.46	2.15	3.47	7.18	2.52	2.85	6.84	2.81	2.43	6.45	3.07	2.10	6.02	3.30	1.82	5.54	3.52	1.57	5.03	3.76	1.34	4.49	4.04	1.11
-7	7.58	2.14	3.54	7.30	2.50	2.92	6.98	2.81	2.48	6.60	3.06	2.16	6.18	3.30	1.87	5.72	3.52	1.63	5.23	3.76	1.39	4.70	4.04	1.16
-6	7.70	2.12	3.63	7.44	2.49	2.99	7.12	2.80	2.54	6.76	3.06	2.21	6.35	3.29	1.93	5.91	3.52	1.68	5.43	3.76	1.44	4.93	4.04	1.22
-4	7.98	2.09	3.82	7.73	2.47	3.13	7.43	2.79	2.66	7.10	3.05	2.33	6.72	3.29	2.04	6.31	3.52	1.79	5.87	3.77	1.56	5.41	4.04	1.34
-2	8.30	2.07	4.01	8.07	2.46	3.28	7.79	2.78	2.80	7.48	3.05	2.45	7.14	3.29	2.17	6.76	3.53	1.92	6.36	3.77	1.69	5.94	4.05	1.47
0	8.67	2.05	4.23	8.46	2.45	3.45	8.21	2.77	2.96	7.93	3.05	2.60	7.61	3.30	2.31	7.27	3.54	2.05	6.91	3.79	1.82	6.53	4.06	1.61
1	8.88	2.05	4.33	8.68	2.45	3.54	8.44	2.78	3.04	8.17	3.06	2.67	7.87	3.31	2.38	7.55	3.54	2.13	7.21	3.79	1.90	6.86	4.07	1.69
2				9.13	2.45	3.73	8.69	2.71	3.21	8.51	3.06	2.78	8.20	3.27	2.51	7.85	3.55	2.21	7.47	3.80	1.97	7.04	4.08	1.73
4				10.34	2.46	4.20	10.00	2.80	3.57	9.66	3.08	3.14	9.30	3.34	2.78	8.91	3.58	2.49	8.48	3.83	2.21	7.99	4.11	1.94
6				11.46	2.49	4.60	11.10	2.83	3.92	10.73	3.12	3.44	10.34	3.38	3.06	9.91	3.62	2.74	9.43	3.88	2.43	8.89	4.15	2.14
7				11.99	2.61	4.59	11.93	2.88	4.14	11.24	3.23	3.48	10.88	3.47	3.14	10.38	3.73	2.78	9.88	3.97	2.49	9.31	4.24	2.20
8				12.49	2.67	4.68	12.12	2.99	4.05	11.72	3.28	3.57	11.30	3.53	3.20	10.83	3.77	2.87	10.31	4.01	2.57	9.72	4.27	2.28
10				13.42	2.78	4.83	13.04	3.10	4.21	12.63	3.38	3.74	12.18	3.62	3.36	11.69	3.85	3.04	11.13	4.09	2.72	10.50	4.34	2.42
12				14.25	2.89	4.93	13.86	3.20	4.33	13.45	3.47	3.88	12.98	3.71	3.50	12.47	3.93	3.17	11.88	4.16	2.86	11.22	4.41	2.54
14				14.97	3.00	4.99	14.59	3.30	4.42	14.17	3.56	3.98	13.70	3.79	3.61	13.17	4.01	3.28	12.56	4.23	2.97	11.86	4.47	2.65
16				15.35	3.09	4.97	15.02	3.39	4.43	14.66	3.64	4.03	14.26	3.87	3.68	13.78	4.08	3.38	13.22	4.30	3.07	12.54	4.53	2.77
18				15.73	3.18	4.95	15.43	3.47	4.45	15.09	3.72	4.06	14.70	3.94	3.73	14.23	4.14	3.44	13.68	4.36	3.14	13.01	4.59	2.83
20				16.04	3.26	4.92	15.75	3.54	4.45	15.43	3.79	4.07	15.05	4.00	3.76	14.59	4.21	3.47	14.04	4.42	3.18	13.38	4.65	2.88
22				16.27	3.33	4.89	16.00	3.61	4.43	15.69	3.85	4.08	15.32	4.06	3.77	14.87	4.26	3.49	14.33	4.47	3.21	13.66	4.70	2.91
24				16.43	3.39	4.85	16.17	3.67	4.41	15.88	3.90	4.07	15.52	4.11	3.78	15.08	4.31	3.50	14.54	4.52	3.22	13.88	4.74	2.93
26				16.54	3.44	4.81	16.30	3.72	4.38	16.01	3.95	4.05	15.66	4.15	3.77	15.23	4.35	3.50	14.69	4.56	3.22			
28				16.61	3.48	4.77	16.38	3.75	4.37	16.10	3.98	4.05	15.75	4.19	3.76	15.32	4.39	3.49	14.78	4.59	3.22			
30				16.64	3.51	4.74	16.42	3.78	4.34	16.15	4.01	4.03	15.81	4.22	3.75	15.38	4.41	3.49	14.84	4.62	3.21			
32				16.65	3.53	4.72	16.43	3.80	4.32	16.17	4.03	4.01	15.83	4.23	3.74	15.40	4.43	3.48	14.86	4.64	3.20			
34				16.64	3.54	4.70	16.43	3.81	4.31	16.17	4.04	4.00	15.83	4.24	3.73	15.40	4.44	3.47	14.86	4.65	3.20			
36				16.63	3.53	4.71	16.42	3.80	4.32	16.16	4.03	4.01	15.83	4.24	3.73	15.39	4.44	3.47	14.84	4.65	3.19			
38				16.62	3.51	4.74	16.42	3.78	4.34	16.16	4.02	4.02	15.82	4.23	3.74	15.39	4.43	3.47	14.83	4.65	3.19			
40				16.63	3.48	4.78	16.43	3.75	4.38	16.17	3.99	4.05	15.83	4.20	3.77	15.38	4.41	3.49	14.82	4.63	3.20			
42				16.66	3.44	4.84	16.47	3.71	4.44	16.20	3.95	4.10	15.86	4.17	3.80	15.40	4.38	3.52	14.82	4.60	3.22			



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.10. ANK 040 HP | HA (230V/1/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	5.96	2.3	2.59	5.61	2.61	2.15	5.19	2.86	1.81	4.7	3.07	1.53	4.14	3.26	1.27	3.51	3.46	1.01						
-18	6.24	2.30	2.71	5.90	2.62	2.25	5.49	2.88	1.91	5.02	3.10	1.62	4.47	3.30	1.35	3.87	3.50	1.11						
-16	6.49	2.29	2.83	6.16	2.62	2.35	5.76	2.89	1.99	5.30	3.11	1.70	4.78	3.32	1.44	4.20	3.53	1.19						
-14	6.71	2.27	2.96	6.40	2.61	2.45	6.01	2.88	2.09	5.57	3.12	1.79	5.07	3.33	1.52	4.52	3.55	1.27	3.91	3.78	1.03			
-12	6.93	2.24	3.09	6.62	2.59	2.56	6.26	2.88	2.17	5.83	3.12	1.87	5.35	3.34	1.60	4.83	3.56	1.36	4.26	3.79	1.12			
-10	7.14	2.21	3.23	6.85	2.57	2.67	6.50	2.86	2.27	6.09	3.11	1.96	5.64	3.34	1.69	5.14	3.56	1.44	4.60	3.80	1.21	4.03	4.08	0.99
-8	7.36	2.18	3.38	7.08	2.54	2.79	6.75	2.85	2.37	6.37	3.10	2.05	5.94	3.34	1.78	5.47	3.56	1.54	4.97	3.80	1.31	4.43	4.08	1.09
-7	7.48	2.16	3.46	7.21	2.53	2.85	6.89	2.84	2.43	6.52	3.10	2.10	6.10	3.33	1.83	5.65	3.56	1.59	5.16	3.81	1.35	4.64	4.08	1.14
-6	7.60	2.15	3.53	7.34	2.52	2.91	7.03	2.83	2.48	6.67	3.09	2.16	6.27	3.33	1.88	5.83	3.56	1.64	5.36	3.81	1.41	4.87	4.09	1.19
-4	7.88	2.12	3.72	7.63	2.50	3.05	7.34	2.82	2.60	7.00	3.09	2.27	6.63	3.33	1.99	6.23	3.56	1.75	5.80	3.81	1.52	5.34	4.09	1.31
-2	8.19	2.09	3.92	7.96	2.49	3.20	7.69	2.81	2.74	7.39	3.08	2.40	7.04	3.33	2.11	6.67	3.57	1.87	6.28	3.82	1.64	5.86	4.10	1.43
0	8.56	2.08	4.12	8.35	2.48	3.37	8.10	2.81	2.88	7.82	3.09	2.53	7.51	3.34	2.25	7.18	3.58	2.01	6.82	3.83	1.78	6.45	4.11	1.57
1	8.76	2.07	4.23	8.57	2.48	3.46	8.33	2.81	2.96	8.07	3.09	2.61	7.77	3.34	2.33	7.46	3.59	2.08	7.12	3.84	1.85	6.77	4.12	1.64
2				9.01	2.48	3.63	8.55	2.74	3.12	8.40	3.10	2.71	8.10	3.37	2.45	7.74	3.60	2.15	7.37	3.85	1.91	6.95	4.13	1.68
4				10.21	2.49	4.10	9.87	2.83	3.49	9.54	3.12	3.06	9.18	3.38	2.72	8.79	3.62	2.43	8.37	3.88	2.16	7.89	4.16	1.90
6				11.31	2.52	4.49	10.96	2.86	3.83	10.59	3.16	3.35	10.20	3.42	2.98	9.78	3.66	2.67	9.30	3.92	2.37	8.77	4.20	2.09
7				11.83	2.64	4.48	11.90	2.90	4.10	11.09	3.26	3.40	10.74	3.51	3.06	10.25	3.77	2.72	9.75	4.02	2.43	9.19	4.28	2.15
8				12.33	2.70	4.57	11.96	3.03	3.95	11.57	3.31	3.50	11.15	3.57	3.12	10.69	3.81	2.81	10.18	4.06	2.51	9.60	4.32	2.22
10				13.25	2.81	4.72	12.87	3.14	4.10	12.47	3.41	3.66	12.03	3.66	3.29	11.54	3.90	2.96	10.99	4.13	2.66	10.37	4.39	2.36
12				14.06	2.93	4.80	13.68	3.24	4.22	13.27	3.51	3.78	12.82	3.75	3.42	12.31	3.98	3.09	11.73	4.21	2.79	11.07	4.46	2.48
14				14.77	3.03	4.87	14.40	3.34	4.31	13.99	3.60	3.89	13.52	3.83	3.53	13.00	4.05	3.21	12.40	4.28	2.90	11.71	4.52	2.59
16				15.15	3.13	4.84	14.83	3.43	4.32	14.47	3.68	3.93	14.07	3.91	3.60	13.61	4.13	3.30	13.05	4.35	3.00	12.38	4.58	2.70
18				15.53	3.22	4.82	15.23	3.51	4.34	14.89	3.76	3.96	14.51	3.98	3.65	14.05	4.19	3.35	13.50	4.41	3.06	12.84	4.64	2.77
20				15.83	3.30	4.80	15.55	3.58	4.34	15.23	3.83	3.98	14.85	4.05	3.67	14.41	4.25	3.39	13.86	4.47	3.10	13.21	4.70	2.81
22				16.06	3.37	4.77	15.79	3.65	4.33	15.48	3.89	3.98	15.12	4.11	3.68	14.68	4.31	3.41	14.14	4.52	3.13	13.49	4.75	2.84
24				16.22	3.43	4.73	15.97	3.71	4.30	15.67	3.95	3.97	15.32	4.16	3.68	14.89	4.36	3.42	14.35	4.57	3.14	13.70	4.80	2.85
26				16.33	3.48	4.69	16.09	3.76	4.28	15.81	3.99	3.96	15.46	4.20	3.68	15.03	4.40	3.42	14.50	4.61	3.15			
28				16.39	3.52	4.66	16.16	3.80	4.25	15.89	4.03	3.94	15.55	4.24	3.67	15.13	4.44	3.41	14.59	4.64	3.14			
30				16.43	3.55	4.63	16.21	3.83	4.23	15.94	4.06	3.93	15.60	4.27	3.65	15.18	4.46	3.40	14.65	4.67	3.14			
32				16.43	3.57	4.60	16.22	3.84	4.22	15.96	4.08	3.91	15.63	4.28	3.65	15.20	4.48	3.39	14.67	4.69	3.13			
34				16.42	3.58	4.59	16.22	3.85	4.21	15.96	4.08	3.91	15.63	4.29	3.64	15.20	4.49	3.39	14.67	4.70	3.12			
36				16.41	3.57	4.60	16.21	3.85	4.21	15.96	4.08	3.91	15.62	4.29	3.64	15.20	4.49	3.39	14.65	4.71	3.11			
38				16.41	3.55	4.62	16.21	3.83	4.23	15.95	4.06	3.93	15.62	4.28	3.65	15.19	4.48	3.39	14.64	4.70	3.11			
40				16.41	3.52	4.66	16.22	3.80	4.27	15.96	4.04	3.95	15.63	4.25	3.68	15.19	4.46	3.41	14.63	4.68	3.13			
42				16.45	3.47	4.74	16.25	3.75	4.33	15.99	4.00	4.00	15.65	4.22	3.71	15.21	4.43	3.43	14.63	4.66	3.14			

HEATING MODE


COOLING MODE



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Ph	Heating capacity (kW)
Pe	Input power (kW)
	ATTENTION operation with DCPX
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.11. ANK 040 H (400V/3N/50Hz) Heating capacity and input power

HEATING MODE

COOLING MODE

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	6.80	2.48	2.74	6.41	2.82	2.27	5.93	3.09	1.92	5.36	3.31	1.62	4.72	3.52	1.34	4.01	3.73	1.08						
-18	7.12	2.48	2.87	6.74	2.83	2.38	6.27	3.11	2.02	5.72	3.34	1.71	5.11	3.56	1.44	4.42	3.78	1.17						
-16	7.41	2.47	3.00	7.03	2.82	2.49	6.58	3.12	2.11	6.05	3.36	1.80	5.46	3.59	1.52	4.79	3.81	1.26						
-14	7.67	2.45	3.13	7.30	2.81	2.60	6.87	3.11	2.21	6.36	3.37	1.89	5.79	3.60	1.61	5.15	3.83	1.34	4.47	4.08	1.10			
-12	7.91	2.42	3.27	7.56	2.80	2.70	7.14	3.10	2.30	6.66	3.37	1.98	6.11	3.61	1.69	5.51	3.84	1.43	4.86	4.09	1.19			
-10	8.15	2.39	3.41	7.82	2.77	2.82	7.42	3.09	2.40	6.96	3.36	2.07	6.44	3.61	1.78	5.87	3.85	1.52	5.25	4.10	1.28	4.60	4.40	1.05
-8	8.41	2.35	3.58	8.09	2.75	2.94	7.71	3.07	2.51	7.27	3.35	2.17	6.78	3.60	1.88	6.25	3.85	1.62	5.67	4.11	1.38	5.06	4.41	1.15
-7	8.54	2.33	3.67	8.23	2.74	3.00	7.86	3.07	2.56	7.44	3.35	2.22	6.97	3.60	1.94	6.45	3.85	1.68	5.89	4.11	1.43	5.30	4.41	1.20
-6	8.68	2.32	3.74	8.38	2.72	3.08	8.02	3.06	2.62	7.61	3.34	2.28	7.16	3.60	1.99	6.66	3.85	1.73	6.12	4.11	1.49	5.55	4.41	1.26
-4	8.99	2.29	3.93	8.71	2.70	3.23	8.38	3.04	2.76	8.00	3.33	2.40	7.57	3.59	2.11	7.11	3.85	1.85	6.62	4.11	1.61	6.09	4.42	1.38
-2	9.35	2.26	4.14	9.09	2.68	3.39	8.78	3.03	2.90	8.43	3.33	2.53	8.04	3.60	2.23	7.62	3.85	1.98	7.17	4.12	1.74	6.69	4.43	1.51
0	9.77	2.24	4.36	9.53	2.67	3.57	9.25	3.03	3.05	8.93	3.33	2.68	8.58	3.60	2.38	8.19	3.86	2.12	7.79	4.13	1.89	7.36	4.44	1.66
1	10.00	2.24	4.46	9.78	2.67	3.66	9.51	3.03	3.14	9.21	3.34	2.76	8.87	3.61	2.46	8.51	3.87	2.20	8.13	4.14	1.96	7.73	4.45	1.74
2				10.29	2.68	3.84	<b>9.76</b>	<b>3.07</b>	<b>3.18</b>	9.59	3.35	2.86	<b>9.18</b>	<b>3.67</b>	<b>2.50</b>	8.84	3.88	2.28	8.41	4.16	2.02	7.94	4.46	1.78
4				11.65	2.69	4.33	11.27	3.06	3.68	10.89	3.37	3.23	10.48	3.65	2.87	10.04	3.91	2.57	9.55	4.19	2.28	9.00	4.49	2.00
6				12.92	2.72	4.75	12.51	3.09	4.05	12.09	3.41	3.55	11.65	3.69	3.16	11.16	3.96	2.82	10.62	4.23	2.51	10.01	4.54	2.20
7				13.51	2.85	4.74	<b>13.40</b>	<b>3.22</b>	<b>4.16</b>	12.66	3.52	3.60	<b>12.26</b>	<b>3.79</b>	<b>3.23</b>	11.70	4.07	2.87	11.13	4.34	2.56	10.49	4.63	2.27
8				14.07	2.91	4.84	13.65	3.27	4.17	13.21	3.58	3.69	12.73	3.86	3.30	12.21	4.12	2.96	11.62	4.38	2.65	10.96	4.66	2.35
10				15.12	3.04	4.97	14.69	3.39	4.33	14.23	3.69	3.86	13.73	3.95	3.48	13.17	4.21	3.13	12.54	4.46	2.81	11.83	4.74	2.50
12				16.05	3.16	5.08	15.62	3.50	4.46	15.15	3.79	4.00	14.63	4.05	3.61	14.05	4.29	3.28	13.39	4.54	2.95	12.64	4.81	2.63
14				16.87	3.27	5.16	16.44	3.60	4.57	15.97	3.89	4.11	15.44	4.14	3.73	14.84	4.38	3.39	14.15	4.62	3.06	13.37	4.88	2.74
16				17.29	3.38	5.12	16.92	3.70	4.57	16.52	3.98	4.15	16.07	4.22	3.81	15.53	4.45	3.49	14.89	4.69	3.17	14.13	4.95	2.85
18				17.73	3.47	5.11	17.38	3.79	4.59	17.00	4.06	4.19	16.56	4.30	3.85	16.04	4.53	3.54	15.41	4.76	3.24	14.66	5.01	2.93
20				18.07	3.56	5.08	17.75	3.87	4.59	17.38	4.13	4.21	16.96	4.37	3.88	16.44	4.59	3.58	15.83	4.82	3.28	15.07	5.07	2.97
22				18.33	3.64	5.04	18.02	3.94	4.57	17.67	4.20	4.21	17.26	4.43	3.90	16.76	4.65	3.60	16.15	4.88	3.31	15.40	5.13	3.00
24				18.52	3.70	5.01	18.23	4.01	4.55	17.89	4.26	4.20	17.49	4.49	3.90	16.99	4.71	3.61	16.38	4.93	3.32	15.64	5.18	3.02
26				18.64	3.76	4.96	18.37	4.06	4.52	18.04	4.31	4.19	17.65	4.54	3.89	17.16	4.75	3.61	16.55	4.98	3.32			
28				18.72	3.81	4.91	18.45	4.10	4.50	18.14	4.35	4.17	17.75	4.58	3.88	17.27	4.79	3.61	16.66	5.01	3.33			
30				18.75	3.84	4.88	18.50	4.13	4.48	18.19	4.38	4.15	17.81	4.61	3.86	17.33	4.82	3.60	16.72	5.04	3.32			
32				18.76	3.86	4.86	18.52	4.15	4.46	18.22	4.40	4.14	17.84	4.63	3.85	17.35	4.84	3.58	16.74	5.07	3.30			
34				18.75	3.87	4.84	18.51	4.16	4.45	18.22	4.41	4.13	17.84	4.63	3.85	17.36	4.85	3.58	16.74	5.08	3.30			
36				18.73	3.86	4.85	18.51	4.15	4.46	18.21	4.40	4.14	17.84	4.63	3.85	17.35	4.85	3.58	16.73	5.08	3.29			
38				18.73	3.84	4.88	18.50	4.13	4.48	18.21	4.39	4.15	17.83	4.62	3.86	17.34	4.84	3.58	16.71	5.07	3.30			
40				18.74	3.80	4.93	18.51	4.10	4.51	18.22	4.36	4.18	17.84	4.59	3.89	17.34	4.82	3.60	16.70	5.06	3.30			
42				18.78	3.75	5.01	18.55	4.05	4.58	18.26	4.31	4.24	17.87	4.55	3.93	17.36	4.78	3.63	16.70	5.03	3.32			




## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Ph	Heating capacity (kW)
Pe	Input power (kW)
	ATTENTION operation with DCPX
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.12. ANK 040 HP | HA (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	6.71	2.49	2.69	6.32	2.83	2.23	5.85	3.10	1.89	5.29	3.33	1.59	4.66	3.54	1.32	3.96	3.75	1.06						
-18	7.03	2.49	2.82	6.65	2.84	2.34	6.19	3.12	1.98	5.65	3.36	1.68	5.04	3.58	1.41	4.36	3.80	1.15						
-16	7.31	2.48	2.95	6.94	2.84	2.44	6.49	3.13	2.07	5.97	3.38	1.77	5.38	3.61	1.49	4.73	3.83	1.23						
-14	7.57	2.46	3.08	7.21	2.83	2.55	6.78	3.13	2.17	6.28	3.39	1.85	5.71	3.62	1.58	5.09	3.85	1.32	4.41	4.10	1.08			
-12	7.81	2.43	3.21	7.46	2.81	2.65	7.05	3.12	2.26	6.57	3.39	1.94	6.03	3.62	1.67	5.44	3.86	1.41	4.79	4.12	1.16			
-10	8.05	2.40	3.35	7.72	2.79	2.77	7.32	3.11	2.35	6.86	3.38	2.03	6.35	3.62	1.75	5.79	3.87	1.50	5.19	4.13	1.26	4.54	4.42	1.03
-8	8.30	2.36	3.52	7.98	2.76	2.89	7.61	3.09	2.46	7.18	3.37	2.13	6.69	3.62	1.85	6.17	3.87	1.59	5.60	4.13	1.36	4.99	4.43	1.13
-7	8.43	2.35	3.59	8.12	2.75	2.95	7.76	3.08	2.52	7.34	3.36	2.18	6.87	3.62	1.90	6.36	3.87	1.64	5.82	4.13	1.41	5.23	4.43	1.18
-6	8.57	2.33	3.68	8.27	2.74	3.02	7.92	3.07	2.58	7.51	3.36	2.24	7.06	3.62	1.95	6.57	3.87	1.70	6.04	4.13	1.46	5.48	4.44	1.23
-4	8.87	2.30	3.86	8.60	2.71	3.17	8.27	3.06	2.70	7.89	3.35	2.36	7.47	3.61	2.07	7.02	3.87	1.81	6.53	4.14	1.58	6.01	4.44	1.35
-2	9.23	2.27	4.07	8.97	2.70	3.32	8.67	3.05	2.84	8.32	3.35	2.48	7.94	3.61	2.20	7.52	3.87	1.94	7.07	4.14	1.71	6.61	4.45	1.49
0	9.64	2.25	4.28	9.41	2.69	3.50	9.13	3.05	2.99	8.81	3.35	2.63	8.46	3.62	2.34	8.09	3.88	2.09	7.69	4.16	1.85	7.27	4.46	1.63
1	9.87	2.25	4.39	9.65	2.69	3.59	9.39	3.05	3.08	9.09	3.36	2.71	8.76	3.63	2.41	8.40	3.89	2.16	8.02	4.17	1.92	7.63	4.47	1.71
2				10.15	2.69	3.77	<b>9.61</b>	<b>3.10</b>	<b>3.10</b>	9.46	3.36	2.82	<b>9.07</b>	<b>3.70</b>	<b>2.45</b>	8.73	3.90	2.24	8.30	4.18	1.99	7.83	4.48	1.75
4				11.50	2.70	4.26	11.12	3.07	3.62	10.74	3.39	3.17	10.34	3.67	2.82	9.91	3.93	2.52	9.43	4.21	2.24	8.89	4.52	1.97
6				12.75	2.73	4.67	12.35	3.11	3.97	11.94	3.43	3.48	11.50	3.71	3.10	11.02	3.98	2.77	10.48	4.26	2.46	9.88	4.56	2.17
7				13.33	2.86	4.66	<b>13.24</b>	<b>3.23</b>	<b>4.10</b>	12.50	3.54	3.53	<b>12.10</b>	<b>3.81</b>	<b>3.18</b>	11.54	4.09	2.82	10.98	4.36	2.52	10.36	4.65	2.23
8				13.89	2.93	4.74	13.47	3.29	4.09	13.04	3.60	3.62	12.57	3.88	3.24	12.05	4.14	2.91	11.47	4.40	2.61	10.81	4.69	2.30
10				14.92	3.06	4.88	14.50	3.41	4.25	14.05	3.71	3.79	13.55	3.98	3.40	13.00	4.23	3.07	12.38	4.49	2.76	11.68	4.76	2.45
12				15.84	3.18	4.98	15.42	3.52	4.38	14.95	3.81	3.92	14.44	4.07	3.55	13.87	4.32	3.21	13.21	4.57	2.89	12.47	4.84	2.58
14				16.65	3.29	5.06	16.22	3.62	4.48	15.76	3.91	4.03	15.24	4.16	3.66	14.64	4.40	3.33	13.97	4.64	3.01	13.19	4.91	2.69
16				17.07	3.40	5.02	16.70	3.72	4.49	16.31	4.00	4.08	15.86	4.24	3.74	15.33	4.48	3.42	14.70	4.72	3.11	13.95	4.98	2.80
18				17.50	3.49	5.01	17.16	3.81	4.50	16.78	4.08	4.11	16.35	4.32	3.78	15.83	4.55	3.48	15.21	4.78	3.18	14.47	5.04	2.87
20				17.84	3.58	4.98	17.52	3.89	4.50	17.16	4.16	4.13	16.73	4.39	3.81	16.23	4.62	3.51	15.62	4.85	3.22	14.88	5.10	2.92
22				18.09	3.66	4.94	17.79	3.96	4.49	17.44	4.22	4.13	17.04	4.46	3.82	16.54	4.68	3.53	15.93	4.91	3.24	15.20	5.16	2.95
24				18.28	3.72	4.91	17.99	4.03	4.46	17.66	4.28	4.13	17.26	4.51	3.83	16.77	4.73	3.55	16.17	4.96	3.26	15.43	5.21	2.96
26				18.40	3.78	4.87	18.13	4.08	4.44	17.81	4.33	4.11	17.42	4.56	3.82	16.93	4.78	3.54	16.34	5.00	3.27			
28				18.47	3.83	4.82	18.21	4.12	4.42	17.90	4.37	4.10	17.52	4.60	3.81	17.04	4.82	3.54	16.44	5.04	3.26			
30				18.51	3.86	4.80	18.26	4.15	4.40	17.96	4.40	4.08	17.58	4.63	3.80	17.10	4.85	3.53	16.50	5.07	3.25			
32				18.51	3.88	4.77	18.27	4.17	4.38	17.98	4.42	4.07	17.60	4.65	3.78	17.13	4.87	3.52	16.53	5.09	3.25			
34				18.50	3.89	4.76	18.27	4.18	4.37	17.98	4.43	4.06	17.61	4.66	3.78	17.13	4.88	3.51	16.52	5.10	3.24			
36				18.49	3.88	4.77	18.26	4.17	4.38	17.98	4.43	4.06	17.60	4.66	3.78	17.12	4.88	3.51	16.51	5.11	3.23			
38				18.48	3.86	4.79	18.26	4.16	4.39	17.97	4.41	4.07	17.60	4.64	3.79	17.11	4.87	3.51	16.49	5.10	3.23			
40				18.49	3.82	4.84	18.27	4.12	4.43	17.98	4.38	4.11	17.60	4.62	3.81	17.11	4.84	3.54	16.48	5.08	3.24			
42				18.53	3.77	4.92	18.31	4.07	4.50	18.02	4.34	4.15	17.63	4.58	3.85	17.13	4.81	3.56	16.49	5.06	3.26			


HEATING MODE

COOLING MODE

**ATTENTION**

For the intermediate points, refer to the operating limits graphics (§ 9.2)

**DATA DECLARED ACCORDING TO UNI EN 14511-2**

Key	
Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.13. ANK 045 H (230V/1/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	7.32	2.32	3.16	6.93	2.73	2.54	6.42	3.07	2.09	5.80	3.37	1.72	5.08	3.63	1.40	4.26	3.87	1.10						
-18	7.40	2.34	3.16	7.09	2.75	2.58	6.67	3.09	2.16	6.15	3.39	1.81	5.52	3.65	1.51	4.80	3.90	1.23						
-16	7.54	2.35	3.21	7.31	2.76	2.65	6.97	3.11	2.24	6.52	3.40	1.92	5.98	3.67	1.63	5.35	3.92	1.36						
-14	7.74	2.36	3.28	7.57	2.77	2.73	7.30	3.11	2.35	6.92	3.41	2.03	6.45	3.68	1.75	5.90	3.93	1.50	5.26	4.18	1.26			
-12	7.99	2.36	3.39	7.87	2.77	2.84	7.65	3.12	2.45	7.33	3.42	2.14	6.93	3.69	1.88	6.43	3.94	1.63	5.87	4.19	1.40			
-10	8.29	2.36	3.51	8.21	2.77	2.96	8.03	3.12	2.57	7.75	3.42	2.27	7.39	3.69	2.00	6.95	3.95	1.76	6.44	4.20	1.53	5.86	4.48	1.31
-8	8.61	2.36	3.65	8.56	2.77	3.09	8.41	3.12	2.70	8.17	3.42	2.39	7.84	3.69	2.12	7.44	3.95	1.88	6.97	4.21	1.66	6.43	4.49	1.43
-7	8.79	2.36	3.72	8.74	2.77	3.16	8.60	3.12	2.76	8.37	3.42	2.45	8.06	3.69	2.18	7.67	3.95	1.94	7.21	4.21	1.71	6.70	4.49	1.49
-6	8.96	2.36	3.80	8.92	2.77	3.22	8.79	3.12	2.82	8.56	3.42	2.50	8.26	3.69	2.24	7.89	3.95	2.00	7.45	4.22	1.77	6.95	4.50	1.54
-4	9.33	2.36	3.95	9.29	2.77	3.35	9.16	3.12	2.94	8.94	3.42	2.61	8.65	3.70	2.34	8.29	3.96	2.09	7.87	4.22	1.86	7.39	4.51	1.64
-2	9.70	2.37	4.09	9.64	2.78	3.47	9.50	3.13	3.04	9.29	3.43	2.71	8.99	3.71	2.42	8.64	3.97	2.18	8.22	4.24	1.94	7.75	4.52	1.71
0	10.06	2.38	4.23	9.98	2.79	3.58	9.83	3.14	3.13	9.59	3.45	2.78	9.28	3.72	2.49	8.91	3.99	2.23	8.49	4.26	1.99	8.02	4.54	1.77
1	10.24	2.39	4.28	10.15	2.80	3.63	9.97	3.15	3.17	9.72	3.45	2.82	9.40	3.73	2.52	9.03	4.00	2.26	8.59	4.27	2.01	8.11	4.56	1.78
2				10.11	2.81	3.60	<b>10.16</b>	<b>3.17</b>	<b>3.21</b>	9.87	3.47	2.84	<b>9.02</b>	<b>3.66</b>	<b>2.46</b>	9.17	4.01	2.29	8.67	4.28	2.03	8.10	4.57	1.77
4				11.89	2.84	4.19	11.80	3.19	3.70	11.57	3.50	3.31	11.23	3.78	2.97	10.78	4.04	2.67	10.24	4.31	2.38	9.61	4.61	2.08
6				13.46	2.89	4.66	13.34	3.23	4.13	13.09	3.54	3.70	12.71	3.82	3.33	12.22	4.09	2.99	11.64	4.36	2.67	10.97	4.66	2.35
7				14.18	2.91	4.87	<b>14.04</b>	<b>3.27</b>	<b>4.29</b>	13.78	3.56	3.87	<b>13.50</b>	<b>3.88</b>	<b>3.48</b>	12.88	4.11	3.13	12.27	4.39	2.79	11.58	4.68	2.47
8				14.85	3.06	4.85	14.71	3.37	4.36	14.43	3.66	3.94	14.02	3.92	3.58	13.50	4.18	3.23	12.87	4.45	2.89	12.16	4.73	2.57
10				16.07	3.21	5.01	15.90	3.51	4.53	15.60	3.79	4.12	15.16	4.06	3.73	14.61	4.31	3.39	13.95	4.58	3.05	13.21	4.85	2.72
12				17.11	3.34	5.12	16.93	3.64	4.65	16.61	3.92	4.24	16.15	4.18	3.86	15.58	4.43	3.52	14.89	4.69	3.17	14.11	4.96	2.84
14				18.00	3.46	5.20	17.81	3.76	4.74	17.47	4.03	4.33	17.00	4.28	3.97	16.41	4.53	3.62	15.70	4.78	3.28	14.89	5.05	2.95
16				18.60	3.56	5.22	18.43	3.85	4.79	18.13	4.12	4.40	17.69	4.37	4.05	17.13	4.62	3.71	16.43	4.87	3.37	15.62	5.13	3.04
18				19.18	3.65	5.25	19.01	3.94	4.82	18.70	4.20	4.45	18.25	4.45	4.10	17.68	4.69	3.77	16.98	4.94	3.44	16.16	5.20	3.11
20				19.65	3.72	5.28	19.47	4.01	4.86	19.15	4.27	4.48	18.70	4.51	4.15	18.12	4.75	3.81	17.41	5.00	3.48	16.58	5.26	3.15
22				20.01	3.78	5.29	19.82	4.07	4.87	19.50	4.33	4.50	19.05	4.57	4.17	18.46	4.81	3.84	17.75	5.05	3.51	16.91	5.31	3.18
24				20.27	3.83	5.29	20.09	4.11	4.89	19.76	4.37	4.52	19.31	4.61	4.19	18.72	4.85	3.86	18.00	5.09	3.54	17.16	5.35	3.21
26				20.46	3.87	5.29	20.27	4.15	4.88	19.95	4.41	4.52	19.49	4.65	4.19	18.89	4.88	3.87	18.17	5.12	3.55			
28				20.58	3.90	5.28	20.39	4.18	4.88	20.06	4.43	4.53	19.60	4.67	4.20	19.01	4.91	3.87	18.29	5.15	3.55			
30				20.64	3.92	5.27	20.46	4.20	4.87	20.13	4.45	4.52	19.67	4.69	4.19	19.07	4.92	3.88	18.35	5.16	3.56			
32				20.67	3.93	5.26	20.48	4.21	4.86	20.15	4.46	4.52	19.69	4.70	4.19	19.10	4.93	3.87	18.38	5.17	3.56			
34				20.66	3.93	5.26	20.47	4.21	4.86	20.15	4.46	4.52	19.69	4.70	4.19	19.10	4.94	3.87	18.38	5.18	3.55			
36				20.63	3.92	5.26	20.45	4.21	4.86	20.13	4.46	4.51	19.68	4.70	4.19	19.09	4.94	3.86	18.37	5.18	3.55			
38				20.60	3.91	5.27	20.43	4.20	4.86	20.11	4.45	4.52	19.66	4.69	4.19	19.08	4.93	3.87	18.36	5.17	3.55			
40				20.58	3.90	5.28	20.41	4.18	4.88	20.10	4.44	4.53	19.66	4.68	4.20	19.08	4.92	3.88	18.37	5.16	3.56			
42				20.58	3.87	5.32	20.41	4.16	4.91	20.11	4.42	4.55	19.67	4.67	4.21	19.10	4.91	3.89	18.40	5.16	3.57			



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96



## 10.14. ANK 045 HP | HA (230V/1/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	7.21	2.38	3.03	6.83	2.80	2.44	6.32	3.15	2.01	5.71	3.45	1.66	5.00	3.72	1.34	4.20	3.97	1.06						
-18	7.28	2.40	3.03	6.98	2.82	2.48	6.57	3.17	2.07	6.05	3.48	1.74	5.44	3.75	1.45	4.73	4.00	1.18						
-16	7.42	2.41	3.08	7.19	2.83	2.54	6.86	3.19	2.15	6.42	3.49	1.84	5.89	3.76	1.57	5.27	4.02	1.31						
-14	7.62	2.42	3.15	7.45	2.84	2.62	7.18	3.19	2.25	6.81	3.50	1.95	6.35	3.77	1.68	5.81	4.03	1.44	5.18	4.29	1.21			
-12	7.87	2.42	3.25	7.75	2.84	2.73	7.53	3.20	2.35	7.22	3.51	2.06	6.82	3.78	1.80	6.33	4.04	1.57	5.78	4.30	1.34			
-10	8.16	2.42	3.37	8.08	2.84	2.85	7.90	3.20	2.47	7.63	3.51	2.17	7.28	3.78	1.93	6.84	4.05	1.69	6.34	4.31	1.47	5.77	4.59	1.26
-8	8.48	2.42	3.50	8.43	2.84	2.97	8.28	3.20	2.59	8.04	3.51	2.29	7.72	3.79	2.04	7.32	4.05	1.81	6.86	4.32	1.59	6.33	4.60	1.38
-7	8.65	2.42	3.57	8.60	2.84	3.03	8.46	3.20	2.64	8.24	3.51	2.35	7.93	3.79	2.09	7.55	4.05	1.86	7.10	4.32	1.64	6.60	4.61	1.43
-6	8.82	2.42	3.64	8.78	2.84	3.09	8.65	3.20	2.70	8.43	3.51	2.40	8.13	3.79	2.15	7.77	4.06	1.91	7.33	4.32	1.70	6.84	4.61	1.48
-4	9.18	2.42	3.79	9.14	2.84	3.22	9.01	3.20	2.82	8.80	3.51	2.51	8.52	3.79	2.25	8.16	4.06	2.01	7.74	4.33	1.79	7.27	4.62	1.57
-2	9.54	2.43	3.93	9.49	2.85	3.33	9.36	3.21	2.92	9.14	3.52	2.60	8.85	3.80	2.33	8.50	4.07	2.09	8.09	4.35	1.86	7.63	4.64	1.64
0	9.90	2.44	4.06	9.83	2.86	3.44	9.67	3.22	3.00	9.44	3.53	2.67	9.14	3.82	2.39	8.78	4.09	2.15	8.36	4.37	1.91	7.89	4.66	1.69
1	10.08	2.45	4.11	9.99	2.87	3.48	9.82	3.23	3.04	9.57	3.54	2.70	9.26	3.83	2.42	8.89	4.10	2.17	8.46	4.38	1.93	7.99	4.67	1.71
2				9.96	2.89	3.45	<b>10.00</b>	<b>3.21</b>	<b>3.12</b>	9.72	3.56	2.73	<b>8.86</b>	<b>3.71</b>	<b>2.39</b>	9.02	4.11	2.19	8.53	4.39	1.94	7.97	4.69	1.70
4				11.70	2.92	4.01	11.61	3.27	3.55	11.39	3.59	3.17	11.06	3.87	2.86	10.61	4.15	2.56	10.08	4.43	2.28	9.46	4.73	2.00
6				13.25	2.96	4.48	13.14	3.32	3.96	12.89	3.63	3.55	12.51	3.92	3.19	12.03	4.19	2.87	11.46	4.47	2.56	10.79	4.78	2.26
7				13.96	2.99	4.67	<b>13.84</b>	<b>3.37</b>	<b>4.11</b>	13.57	3.66	3.71	<b>13.29</b>	<b>3.98</b>	<b>3.34</b>	12.68	4.22	3.00	12.08	4.50	2.68	11.40	4.80	2.38
8				14.62	3.14	4.66	14.48	3.46	4.18	14.20	3.75	3.79	13.80	4.02	3.43	13.29	4.29	3.10	12.67	4.57	2.77	11.97	4.85	2.47
10				15.82	3.29	4.81	15.66	3.61	4.34	15.36	3.89	3.95	14.93	4.16	3.59	14.38	4.43	3.25	13.74	4.69	2.93	13.00	4.98	2.61
12				16.85	3.43	4.91	16.67	3.74	4.46	16.35	4.02	4.07	15.90	4.28	3.71	15.34	4.54	3.38	14.66	4.81	3.05	13.90	5.09	2.73
14				17.72	3.55	4.99	17.53	3.85	4.55	17.20	4.13	4.16	16.74	4.39	3.81	16.15	4.65	3.47	15.45	4.91	3.15	14.66	5.18	2.83
16				18.31	3.65	5.02	18.15	3.95	4.59	17.85	4.23	4.22	17.42	4.48	3.89	16.86	4.74	3.56	16.18	4.99	3.24	15.37	5.26	2.92
18				18.88	3.74	5.05	18.71	4.04	4.63	18.41	4.31	4.27	17.97	4.56	3.94	17.41	4.81	3.62	16.72	5.07	3.30	15.90	5.33	2.98
20				19.34	3.82	5.06	19.16	4.11	4.66	18.85	4.38	4.30	18.41	4.63	3.98	17.84	4.88	3.66	17.14	5.13	3.34	16.33	5.39	3.03
22				19.69	3.88	5.07	19.51	4.17	4.68	19.20	4.44	4.32	18.75	4.69	4.00	18.18	4.93	3.69	17.47	5.18	3.37	16.65	5.44	3.06
24				19.96	3.93	5.08	19.77	4.22	4.68	19.46	4.48	4.34	19.00	4.73	4.02	18.43	4.97	3.71	17.72	5.22	3.39	16.89	5.48	3.08
26				20.14	3.97	5.07	19.96	4.26	4.69	19.64	4.52	4.35	19.18	4.77	4.02	18.60	5.01	3.71	17.89	5.25	3.41			
28				20.26	4.00	5.07	20.07	4.29	4.68	19.75	4.55	4.34	19.30	4.79	4.03	18.71	5.03	3.72	18.00	5.28	3.41			
30				20.32	4.02	5.05	20.14	4.31	4.67	19.82	4.57	4.34	19.36	4.81	4.02	18.78	5.05	3.72	18.07	5.30	3.41			
32				20.35	4.03	5.05	20.16	4.32	4.67	19.84	4.58	4.33	19.39	4.82	4.02	18.80	5.06	3.72	18.09	5.31	3.41			
34				20.34	4.03	5.05	20.16	4.32	4.67	19.84	4.58	4.33	19.39	4.82	4.02	18.80	5.06	3.72	18.10	5.31	3.41			
36				20.31	4.02	5.05	20.13	4.31	4.67	19.82	4.58	4.33	19.37	4.82	4.02	18.79	5.06	3.71	18.09	5.31	3.41			
38				20.28	4.01	5.06	20.11	4.30	4.68	19.80	4.57	4.33	19.36	4.81	4.02	18.78	5.06	3.71	18.08	5.31	3.40			
40				20.26	4.00	5.07	20.09	4.29	4.68	19.79	4.55	4.35	19.35	4.80	4.03	18.78	5.05	3.72	18.08	5.30	3.41			
42				20.26	3.97	5.10	20.10	4.27	4.71	19.80	4.54	4.36	19.37	4.79	4.04	18.81	5.03	3.74	18.11	5.29	3.42			

HEATING MODE

COOLING MODE



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Ph	Heating capacity (kW)
Pe	Input power (kW)
	ATTENTION operation with DCPX
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.15. ANK 045 H (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	6.72	2.90	2.32	6.56	3.04	2.16	6.31	3.28	1.92	5.93	3.58	1.66	5.39	3.92	1.38	4.64	4.25	1.09						
-18	6.96	2.91	2.39	6.79	3.06	2.22	6.55	3.30	1.98	6.20	3.61	1.72	5.71	3.95	1.45	5.02	4.29	1.17						
-16	7.30	2.91	2.51	7.11	3.07	2.32	6.88	3.31	2.08	6.55	3.62	1.81	6.10	3.97	1.54	5.47	4.32	1.27						
-14	7.71	2.91	2.65	7.51	3.07	2.45	7.27	3.32	2.19	6.97	3.63	1.92	6.55	3.98	1.65	5.98	4.34	1.38	5.22	4.67	1.12			
-12	8.18	2.90	2.82	7.96	3.07	2.59	7.72	3.32	2.33	7.43	3.64	2.04	7.05	3.99	1.77	6.53	4.35	1.50	5.84	4.69	1.25			
-10	8.70	2.90	3.00	8.45	3.06	2.76	8.21	3.32	2.47	7.93	3.64	2.18	7.58	4.00	1.90	7.11	4.36	1.63	6.49	4.70	1.38	5.68	4.99	1.14
-8	9.26	2.90	3.19	8.98	3.06	2.93	8.72	3.32	2.63	8.45	3.64	2.32	8.12	4.00	2.03	7.70	4.37	1.76	7.14	4.71	1.52	6.41	5.00	1.28
-7	9.54	2.90	3.29	9.25	3.06	3.02	8.99	3.32	2.71	8.72	3.64	2.40	8.40	4.00	2.10	8.00	4.37	1.83	7.47	4.71	1.59	6.78	5.01	1.35
-6	9.83	2.90	3.39	9.52	3.07	3.10	9.25	3.32	2.79	8.98	3.65	2.46	8.67	4.00	2.17	8.29	4.37	1.90	7.79	4.72	1.65	7.14	5.02	1.42
-4	10.41	2.91	3.58	10.06	3.07	3.28	9.77	3.33	2.93	9.50	3.65	2.60	9.22	4.01	2.30	8.87	4.38	2.03	8.43	4.73	1.78	7.85	5.03	1.56
-2	10.98	2.93	3.75	10.59	3.09	3.43	10.28	3.34	3.08	10.00	3.66	2.73	9.73	4.02	2.42	9.42	4.39	2.15	9.03	4.74	1.91	8.52	5.04	1.69
0	11.52	2.96	3.89	11.09	3.11	3.57	10.75	3.36	3.20	10.47	3.68	2.85	10.21	4.04	2.53	9.92	4.41	2.25	9.58	4.76	2.01	9.14	5.06	1.81
1	11.78	2.98	3.95	11.32	3.13	3.62	10.97	3.38	3.25	10.68	3.70	2.89	10.42	4.05	2.57	10.15	4.42	2.30	9.83	4.77	2.06	9.42	5.07	1.86
2				11.71	3.15	3.72	<b>11.24</b>	<b>3.38</b>	<b>3.33</b>	10.97	3.71	2.96	<b>10.62</b>	<b>4.06</b>	<b>2.62</b>	10.37	4.43	2.34	10.00	4.78	2.09	9.53	5.08	1.88
4				13.16	3.20	4.11	12.72	3.44	3.70	12.35	3.75	3.29	12.01	4.11	2.92	11.65	4.47	2.61	11.23	4.81	2.33	10.68	5.11	2.09
6				14.51	3.26	4.45	14.05	3.50	4.01	13.65	3.81	3.58	13.27	4.16	3.19	12.86	4.52	2.85	12.38	4.86	2.55	11.77	5.16	2.28
7				15.15	3.30	4.59	<b>14.80</b>	<b>3.55</b>	<b>4.17</b>	14.27	3.84	3.72	<b>14.07</b>	<b>4.18</b>	<b>3.37</b>	13.44	4.55	2.95	12.93	4.89	2.64	12.29	5.18	2.37
8				15.76	3.36	4.69	15.28	3.64	4.20	14.86	3.94	3.77	14.44	4.26	3.39	13.99	4.58	3.05	13.46	4.91	2.74	12.79	5.24	2.44
10				16.89	3.51	4.81	16.41	3.79	4.33	15.97	4.08	3.91	15.53	4.38	3.55	15.04	4.69	3.21	14.46	5.01	2.89	13.73	5.33	2.58
12				17.92	3.65	4.91	17.43	3.92	4.45	16.97	4.20	4.04	16.51	4.49	3.68	16.00	4.80	3.33	15.38	5.10	3.02	14.60	5.41	2.70
14				18.82	3.78	4.98	18.34	4.04	4.54	17.88	4.31	4.15	17.40	4.60	3.78	16.86	4.89	3.45	16.21	5.19	3.12	15.39	5.48	2.81
16				19.22	3.89	4.94	18.90	4.14	4.57	18.55	4.41	4.21	18.15	4.69	3.87	17.64	4.97	3.55	17.01	5.26	3.23	16.21	5.55	2.92
18				19.77	3.99	4.95	19.47	4.24	4.59	19.14	4.50	4.25	18.74	4.77	3.93	18.24	5.05	3.61	17.60	5.33	3.30	16.79	5.60	3.00
20				20.24	4.08	4.96	19.95	4.32	4.62	19.63	4.57	4.30	19.24	4.84	3.98	18.73	5.11	3.67	18.09	5.39	3.36	17.27	5.66	3.05
22				20.62	4.15	4.97	20.35	4.39	4.64	20.03	4.64	4.32	19.64	4.90	4.01	19.13	5.17	3.70	18.48	5.44	3.40	17.64	5.70	3.09
24				20.92	4.21	4.97	20.66	4.44	4.65	20.35	4.69	4.34	19.96	4.95	4.03	19.45	5.22	3.73	18.78	5.48	3.43	17.93	5.74	3.12
26				21.16	4.26	4.97	20.91	4.49	4.66	20.60	4.74	4.35	20.21	5.00	4.04	19.69	5.26	3.74	19.02	5.52	3.45			
28				21.34	4.29	4.97	21.10	4.53	4.66	20.80	4.77	4.36	20.40	5.03	4.06	19.87	5.29	3.76	19.18	5.55	3.46			
30				21.47	4.32	4.97	21.24	4.55	4.67	20.94	4.80	4.36	20.54	5.05	4.07	20.00	5.31	3.77	19.29	5.57	3.46			
32				21.58	4.33	4.98	21.35	4.56	4.68	21.04	4.81	4.37	20.63	5.07	4.07	20.08	5.33	3.77	19.35	5.58	3.47			
34				21.65	4.33	5.00	21.42	4.57	4.69	21.12	4.82	4.38	20.70	5.08	4.07	20.13	5.34	3.77	19.38	5.59	3.47			
36				21.71	4.32	5.03	21.48	4.56	4.71	21.17	4.81	4.40	20.74	5.08	4.08	20.15	5.34	3.77	19.38	5.60	3.46			
38				21.76	4.29	5.07	21.53	4.54	4.74	21.21	4.80	4.42	20.77	5.07	4.10	20.16	5.33	3.78	19.37	5.59	3.47			
40				21.81	4.26	5.12	21.58	4.51	4.78	21.25	4.78	4.45	20.79	5.05	4.12	20.17	5.32	3.79	19.35	5.59	3.46			
42				21.88	4.22	5.18	21.64	4.48	4.83	21.30	4.75	4.48	20.83	5.02	4.15	20.18	5.30	3.81	19.33	5.57	3.47			



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.16. ANK 045 HP | HA (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	6.61	2.96	2.23	6.46	3.11	2.08	6.21	3.35	1.85	5.84	3.66	1.60	5.31	4.00	1.33	4.57	4.34	1.05						
-18	6.85	2.97	2.31	6.69	3.12	2.14	6.45	3.37	1.91	6.11	3.69	1.66	5.62	4.03	1.39	4.94	4.38	1.13						
-16	7.18	2.97	2.42	7.00	3.13	2.24	6.77	3.39	2.00	6.45	3.70	1.74	6.00	4.05	1.48	5.39	4.41	1.22						
-14	7.59	2.97	2.56	7.39	3.13	2.36	7.16	3.39	2.11	6.86	3.71	1.85	6.45	4.07	1.58	5.89	4.43	1.33	5.14	4.77	1.08			
-12	8.05	2.97	2.71	7.83	3.13	2.50	7.60	3.39	2.24	7.31	3.72	1.97	6.94	4.08	1.70	6.43	4.45	1.44	5.75	4.79	1.20			
-10	8.57	2.96	2.90	8.32	3.13	2.66	8.08	3.39	2.38	7.81	3.72	2.10	7.46	4.08	1.83	7.00	4.45	1.57	6.39	4.80	1.33	5.59	5.10	1.10
-8	9.11	2.96	3.08	8.84	3.13	2.82	8.59	3.39	2.53	8.32	3.72	2.24	8.00	4.09	1.96	7.58	4.46	1.70	7.03	4.81	1.46	6.31	5.11	1.23
-7	9.39	2.96	3.17	9.10	3.13	2.91	8.85	3.39	2.61	8.58	3.72	2.31	8.27	4.09	2.02	7.87	4.46	1.76	7.35	4.82	1.52	6.67	5.12	1.30
-6	9.68	2.97	3.26	9.37	3.13	2.99	9.11	3.39	2.69	8.84	3.72	2.38	8.54	4.09	2.09	8.16	4.47	1.83	7.67	4.82	1.59	7.03	5.12	1.37
-4	10.24	2.97	3.45	9.90	3.14	3.15	9.62	3.40	2.83	9.35	3.73	2.51	9.07	4.10	2.21	8.73	4.47	1.95	8.30	4.83	1.72	7.73	5.14	1.50
-2	10.80	2.99	3.61	10.42	3.15	3.31	10.12	3.41	2.97	9.85	3.74	2.63	9.58	4.11	2.33	9.27	4.49	2.06	8.89	4.84	1.84	8.39	5.15	1.63
0	11.34	3.02	3.75	10.91	3.18	3.43	10.58	3.44	3.08	10.30	3.76	2.74	10.05	4.13	2.43	9.77	4.50	2.17	9.43	4.86	1.94	8.99	5.17	1.74
1	11.59	3.04	3.81	11.14	3.20	3.48	10.80	3.45	3.13	10.52	3.78	2.78	10.26	4.14	2.48	9.99	4.52	2.21	9.68	4.87	1.99	9.27	5.18	1.79
2				11.53	3.22	3.58	11.02	3.47	3.18	10.79	3.79	2.85	10.46	4.15	2.52	10.20	4.53	2.25	9.85	4.88	2.02	9.38	5.19	1.81
4				12.96	3.27	3.96	12.52	3.52	3.56	12.16	3.83	3.17	11.83	4.19	2.82	11.47	4.57	2.51	11.05	4.92	2.25	10.52	5.22	2.02
6				14.29	3.33	4.29	13.83	3.58	3.86	13.44	3.89	3.46	13.07	4.25	3.08	12.66	4.61	2.75	12.19	4.96	2.46	11.58	5.27	2.20
7				14.91	3.37	4.42	14.88	3.60	4.13	14.04	3.92	3.58	13.85	4.27	3.24	13.23	4.64	2.85	12.73	4.99	2.55	12.09	5.29	2.29
8				15.51	3.43	4.52	15.04	3.72	4.04	14.62	4.03	3.63	14.22	4.35	3.27	13.78	4.68	2.94	13.25	5.02	2.64	12.59	5.35	2.35
10				16.63	3.59	4.63	16.15	3.87	4.17	15.72	4.17	3.77	15.28	4.48	3.41	14.80	4.80	3.08	14.23	5.12	2.78	13.52	5.44	2.49
12				17.64	3.73	4.73	17.15	4.00	4.29	16.71	4.29	3.90	16.26	4.59	3.54	15.75	4.90	3.21	15.13	5.21	2.90	14.37	5.52	2.60
14				18.53	3.86	4.80	18.05	4.12	4.38	17.60	4.40	4.00	17.13	4.70	3.64	16.60	5.00	3.32	15.95	5.30	3.01	15.15	5.60	2.71
16				18.92	3.97	4.77	18.60	4.23	4.40	18.26	4.50	4.06	17.86	4.79	3.73	17.37	5.08	3.42	16.75	5.37	3.12	15.96	5.66	2.82
18				19.47	4.08	4.77	19.17	4.33	4.43	18.84	4.59	4.10	18.45	4.87	3.79	17.95	5.16	3.48	17.33	5.44	3.19	16.53	5.72	2.89
20				19.92	4.16	4.79	19.64	4.41	4.45	19.32	4.67	4.14	18.93	4.94	3.83	18.44	5.22	3.53	17.80	5.50	3.24	17.00	5.78	2.94
22				20.29	4.24	4.79	20.03	4.48	4.47	19.72	4.74	4.16	19.33	5.01	3.86	18.83	5.28	3.57	18.19	5.55	3.28	17.37	5.82	2.98
24				20.59	4.30	4.79	20.34	4.54	4.48	20.03	4.80	4.17	19.65	5.06	3.88	19.15	5.33	3.59	18.49	5.60	3.30	17.65	5.86	3.01
26				20.83	4.35	4.79	20.58	4.59	4.48	20.28	4.84	4.19	19.89	5.10	3.90	19.38	5.37	3.61	18.72	5.64	3.32			
28				21.00	4.38	4.79	20.77	4.62	4.50	20.47	4.88	4.19	20.08	5.14	3.91	19.56	5.40	3.62	18.88	5.67	3.33			
30				21.14	4.41	4.79	20.91	4.65	4.50	20.61	4.90	4.21	20.22	5.16	3.92	19.69	5.43	3.63	18.99	5.69	3.34			
32				21.24	4.42	4.81	21.01	4.66	4.51	20.71	4.92	4.21	20.31	5.18	3.92	19.77	5.44	3.63	19.05	5.71	3.34			
34				21.31	4.42	4.82	21.09	4.67	4.52	20.79	4.92	4.23	20.37	5.19	3.92	19.82	5.45	3.64	19.08	5.71	3.34			
36				21.37	4.41	4.85	21.14	4.66	4.54	20.84	4.92	4.24	20.41	5.18	3.94	19.84	5.45	3.64	19.08	5.72	3.34			
38				21.42	4.39	4.88	21.19	4.64	4.57	20.88	4.90	4.26	20.44	5.18	3.95	19.85	5.45	3.64	19.07	5.71	3.34			
40				21.47	4.35	4.94	21.24	4.61	4.61	20.92	4.88	4.29	20.47	5.16	3.97	19.85	5.43	3.66	19.04	5.71	3.33			
42				21.54	4.31	5.00	21.31	4.57	4.66	20.97	4.85	4.32	20.5	5.13	4.00	19.87	5.41	3.67	19.03	5.69	3.34			

HEATING MODE


COOLING MODE



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Ph	Heating capacity (kW)
Pe	Input power (kW)
	ATTENTION operation with DCPX
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.17. ANK 050 H (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	7.31	2.73	2.68	7.43	3.16	2.35	7.22	3.53	2.05	6.72	3.84	1.75	5.98	4.13	1.45	5.04	4.43	1.14						
-18	7.64	2.74	2.79	7.78	3.18	2.45	7.60	3.55	2.14	7.16	3.87	1.85	6.48	4.17	1.55	5.63	4.47	1.26						
-16	8.05	2.74	2.94	8.20	3.19	2.57	8.04	3.56	2.26	7.64	3.88	1.97	7.03	4.19	1.68	6.25	4.49	1.39						
-14	8.52	2.74	3.11	8.66	3.18	2.72	8.52	3.56	2.39	8.15	3.89	2.10	7.59	4.20	1.81	6.89	4.51	1.53	6.08	4.85	1.25			
-12	9.02	2.73	3.30	9.15	3.18	2.88	9.02	3.56	2.53	8.68	3.89	2.23	8.16	4.20	1.94	7.52	4.52	1.66	6.79	4.86	1.40			
-10	9.54	2.72	3.51	9.65	3.17	3.04	9.52	3.55	2.68	9.20	3.89	2.37	8.71	4.20	2.07	8.12	4.52	1.80	7.47	4.87	1.53	6.80	5.27	1.29
-8	10.06	2.71	3.71	10.15	3.16	3.21	10.01	3.54	2.83	9.69	3.88	2.50	9.23	4.20	2.20	8.69	4.52	1.92	8.10	4.88	1.66	7.50	5.28	1.42
-7	10.32	2.70	3.82	10.38	3.16	3.28	10.24	3.54	2.89	9.92	3.88	2.56	9.47	4.20	2.25	8.95	4.52	1.98	8.38	4.88	1.72	7.83	5.29	1.48
-6	10.56	2.70	3.91	10.61	3.16	3.36	10.46	3.54	2.95	10.14	3.88	2.61	9.70	4.20	2.31	9.19	4.53	2.03	8.65	4.88	1.77	8.13	5.29	1.54
-4	11.03	2.70	4.09	11.04	3.16	3.49	10.85	3.54	3.06	10.52	3.88	2.71	10.09	4.20	2.40	9.61	4.53	2.12	9.12	4.89	1.87	8.66	5.30	1.63
-2	11.45	2.72	4.21	11.40	3.17	3.60	11.17	3.55	3.15	10.83	3.89	2.78	10.40	4.22	2.46	9.94	4.54	2.19	9.48	4.90	1.93	9.08	5.32	1.71
0	11.79	2.74	4.30	11.67	3.19	3.66	11.41	3.58	3.19	11.03	3.92	2.81	10.60	4.24	2.50	10.14	4.57	2.22	9.72	4.92	1.98	9.36	5.34	1.75
1	11.92	2.76	4.32	11.78	3.21	3.67	11.48	3.59	3.20	11.09	3.93	2.82	10.65	4.25	2.51	10.20	4.58	2.23	9.78	4.94	1.98	9.44	5.36	1.76
2				11.85	3.23	3.67	<b>11.56</b>	<b>3.55</b>	<b>3.26</b>	11.12	3.95	2.82	<b>10.67</b>	<b>4.26</b>	<b>2.50</b>	10.22	4.60	2.22	9.81	4.96	1.98	9.49	5.37	1.77
4				14.19	3.28	4.33	13.60	3.66	3.72	13.16	4.00	3.29	12.77	4.32	2.96	12.35	4.65	2.66	11.81	5.01	2.36	11.07	5.42	2.04
6				16.05	3.36	4.78	15.45	3.74	4.13	14.97	4.07	3.68	14.54	4.39	3.31	14.07	4.72	2.98	13.47	5.07	2.66	12.66	5.49	2.31
7				16.88	3.51	4.81	<b>16.27</b>	<b>3.81</b>	<b>4.27</b>	15.78	4.13	3.82	<b>15.38</b>	<b>4.44</b>	<b>3.46</b>	14.84	4.77	3.11	14.21	5.12	2.78	13.37	5.50	2.43
8				17.65	3.58	4.93	17.03	3.89	4.38	16.53	4.20	3.94	16.07	4.51	3.56	15.55	4.83	3.22	14.90	5.18	2.88	14.03	5.55	2.53
10				19.02	3.72	5.11	18.39	4.03	4.56	17.87	4.33	4.13	17.37	4.63	3.75	16.82	4.95	3.40	16.12	5.28	3.05	15.20	5.65	2.69
12				20.16	3.85	5.24	19.52	4.16	4.69	18.99	4.45	4.27	18.47	4.75	3.89	17.89	5.06	3.54	17.15	5.38	3.19	16.18	5.74	2.82
14				21.09	3.97	5.31	20.46	4.27	4.79	19.92	4.56	4.37	19.39	4.85	4.00	18.78	5.15	3.65	18.01	5.47	3.29	17.00	5.82	2.92
16				21.59	4.08	5.29	21.07	4.37	4.82	20.63	4.66	4.43	20.17	4.95	4.07	19.60	5.24	3.74	18.83	5.55	3.39	17.76	5.89	3.02
18				22.24	4.17	5.33	21.71	4.47	4.86	21.26	4.75	4.48	20.79	5.03	4.13	20.21	5.32	3.80	19.44	5.63	3.45	18.36	5.96	3.08
20				22.75	4.25	5.35	22.22	4.55	4.88	21.76	4.83	4.51	21.29	5.11	4.17	20.71	5.39	3.84	19.92	5.69	3.50	18.84	6.01	3.13
22				23.15	4.32	5.36	22.61	4.61	4.90	22.15	4.90	4.52	21.68	5.17	4.19	21.09	5.46	3.86	20.30	5.75	3.53	19.21	6.06	3.17
24				23.44	4.37	5.36	22.91	4.67	4.91	22.45	4.95	4.54	21.96	5.23	4.20	21.37	5.51	3.88	20.58	5.80	3.55	19.49	6.11	3.19
26				23.65	4.42	5.35	23.11	4.72	4.90	22.65	5.00	4.53	22.17	5.28	4.20	21.57	5.55	3.89	20.77	5.84	3.56			
28				23.78	4.45	5.34	23.25	4.75	4.89	22.78	5.04	4.52	22.30	5.31	4.20	21.70	5.59	3.88	20.90	5.87	3.56			
30				23.86	4.47	5.34	23.32	4.78	4.88	22.86	5.07	4.51	22.37	5.34	4.19	21.78	5.62	3.88	20.98	5.90	3.56			
32				23.88	4.48	5.33	23.35	4.79	4.87	22.89	5.08	4.51	22.40	5.36	4.18	21.81	5.64	3.87	21.01	5.92	3.55			
34				23.87	4.48	5.33	23.34	4.80	4.86	22.89	5.09	4.50	22.41	5.37	4.17	21.81	5.65	3.86	21.02	5.93	3.54			
36				23.84	4.47	5.33	23.32	4.79	4.87	22.87	5.09	4.49	22.39	5.37	4.17	21.80	5.65	3.86	21.01	5.93	3.54			
38				23.81	4.45	5.35	23.29	4.78	4.87	22.84	5.08	4.50	22.37	5.37	4.17	21.79	5.65	3.86	21.00	5.93	3.54			
40				23.78	4.42	5.38	23.27	4.75	4.90	22.83	5.06	4.51	22.37	5.35	4.18	21.79	5.64	3.86	21.01	5.92	3.55			
42				23.78	4.37	5.44	23.28	4.72	4.93	22.84	5.03	4.54	22.39	5.33	4.20	21.82	5.62	3.88	21.04	5.90	3.57			



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.18. ANK 050 HP | HA (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	7.20	2.79	2.58	7.32	3.23	2.27	7.11	3.61	1.97	6.62	3.93	1.68	5.89	4.23	1.39	4.96	4.53	1.09						
-18	7.53	2.80	2.69	7.66	3.25	2.36	7.49	3.63	2.06	7.05	3.96	1.78	6.39	4.26	1.50	5.54	4.57	1.21						
-16	7.93	2.80	2.83	8.07	3.26	2.48	7.92	3.64	2.18	7.53	3.97	1.90	6.92	4.28	1.62	6.16	4.60	1.34						
-14	8.39	2.80	3.00	8.53	3.26	2.62	8.40	3.64	2.31	8.03	3.98	2.02	7.48	4.29	1.74	6.79	4.61	1.47	5.99	4.96	1.21			
-12	8.88	2.79	3.18	9.01	3.25	2.77	8.89	3.64	2.44	8.55	3.98	2.15	8.04	4.30	1.87	7.41	4.62	1.60	6.69	4.97	1.35			
-10	9.40	2.78	3.38	9.51	3.24	2.94	9.38	3.63	2.58	9.06	3.97	2.28	8.58	4.30	2.00	8.00	4.62	1.73	7.36	4.98	1.48	6.70	5.39	1.24
-8	9.91	2.77	3.58	9.99	3.23	3.09	9.86	3.62	2.72	9.54	3.97	2.40	9.10	4.30	2.12	8.56	4.62	1.85	7.98	4.99	1.60	7.39	5.40	1.37
-7	10.16	2.77	3.67	10.23	3.23	3.17	10.08	3.62	2.78	9.77	3.97	2.46	9.33	4.29	2.17	8.81	4.63	1.90	8.26	4.99	1.66	7.71	5.41	1.43
-6	10.41	2.76	3.77	10.45	3.23	3.24	10.30	3.62	2.85	9.98	3.97	2.51	9.55	4.30	2.22	9.05	4.63	1.95	8.52	4.99	1.71	8.01	5.41	1.48
-4	10.87	2.76	3.94	10.87	3.23	3.37	10.69	3.62	2.95	10.36	3.97	2.61	9.94	4.30	2.31	9.47	4.63	2.05	8.98	5.00	1.80	8.53	5.42	1.57
-2	11.27	2.78	4.05	11.22	3.24	3.46	11.01	3.63	3.03	10.67	3.98	2.68	10.24	4.31	2.38	9.79	4.65	2.11	9.34	5.01	1.86	8.94	5.44	1.64
0	11.61	2.80	4.15	11.50	3.26	3.53	11.24	3.66	3.07	10.87	4.00	2.72	10.44	4.33	2.41	9.99	4.67	2.14	9.57	5.04	1.90	9.22	5.46	1.69
1	11.75	2.82	4.17	11.60	3.28	3.54	11.31	3.67	3.08	10.93	4.02	2.72	10.49	4.35	2.41	10.05	4.68	2.15	9.63	5.05	1.91	9.30	5.48	1.70
2				11.67	3.30	3.54	11.33	3.65	3.10	10.96	4.04	2.71	10.51	4.36	2.41	10.06	4.70	2.14	9.66	5.07	1.91	9.35	5.50	1.70
4				13.97	3.36	4.16	13.40	3.75	3.57	12.96	4.09	3.17	12.58	4.42	2.85	12.16	4.75	2.56	11.63	5.12	2.27	10.91	5.55	1.97
6				15.81	3.44	4.60	15.22	3.82	3.98	14.75	4.16	3.55	14.32	4.49	3.19	13.86	4.82	2.88	13.27	5.19	2.56	12.47	5.61	2.22
7				16.63	3.59	4.63	16.12	3.91	4.12	15.55	4.22	3.68	15.15	4.54	3.34	14.61	4.88	2.99	14.00	5.23	2.68	13.17	5.62	2.34
8				17.39	3.66	4.75	16.78	3.98	4.22	16.29	4.29	3.80	15.83	4.61	3.43	15.32	4.94	3.10	14.68	5.29	2.78	13.82	5.67	2.44
10				18.73	3.81	4.92	18.11	4.12	4.40	17.60	4.43	3.97	17.11	4.74	3.61	16.57	5.06	3.27	15.88	5.40	2.94	14.97	5.77	2.59
12				19.86	3.94	5.04	19.23	4.25	4.52	18.71	4.55	4.11	18.20	4.86	3.74	17.62	5.17	3.41	16.90	5.50	3.07	15.94	5.86	2.72
14				20.78	4.06	5.12	20.16	4.37	4.61	19.63	4.67	4.20	19.10	4.96	3.85	18.50	5.27	3.51	17.74	5.60	3.17	16.75	5.95	2.82
16				21.27	4.17	5.10	20.76	4.47	4.64	20.32	4.77	4.26	19.87	5.06	3.93	19.30	5.36	3.60	18.54	5.68	3.26	17.50	6.02	2.91
18				21.90	4.26	5.14	21.39	4.57	4.68	20.94	4.86	4.31	20.48	5.15	3.98	19.91	5.44	3.66	19.14	5.75	3.33	18.09	6.09	2.97
20				22.41	4.34	5.16	21.89	4.65	4.71	21.44	4.94	4.34	20.97	5.22	4.02	20.40	5.52	3.70	19.62	5.82	3.37	18.56	6.15	3.02
22				22.80	4.41	5.17	22.28	4.72	4.72	21.82	5.01	4.36	21.35	5.29	4.04	20.77	5.58	3.72	19.99	5.88	3.40	18.93	6.20	3.05
24				23.09	4.47	5.17	22.57	4.78	4.72	22.11	5.07	4.36	21.64	5.35	4.04	21.05	5.63	3.74	20.27	5.93	3.42	19.20	6.25	3.07
26				23.30	4.52	5.15	22.77	4.82	4.72	22.31	5.11	4.37	21.84	5.40	4.04	21.25	5.68	3.74	20.46	5.97	3.43			
28				23.43	4.55	5.15	22.90	4.86	4.71	22.44	5.15	4.36	21.97	5.43	4.05	21.38	5.72	3.74	20.59	6.01	3.43			
30				23.50	4.57	5.14	22.97	4.89	4.70	22.52	5.18	4.35	22.04	5.46	4.04	21.45	5.74	3.74	20.66	6.03	3.43			
32				23.52	4.59	5.12	23.00	4.90	4.69	22.54	5.20	4.33	22.07	5.48	4.03	21.48	5.76	3.73	20.70	6.05	3.42			
34				23.52	4.59	5.12	22.99	4.91	4.68	22.54	5.21	4.33	22.07	5.49	4.02	21.49	5.78	3.72	20.70	6.06	3.42			
36				23.49	4.57	5.14	22.97	4.90	4.69	22.52	5.21	4.32	22.06	5.50	4.01	21.48	5.78	3.72	20.69	6.07	3.41			
38				23.45	4.55	5.15	22.94	4.89	4.69	22.50	5.20	4.33	22.04	5.49	4.01	21.46	5.78	3.71	20.69	6.06	3.41			
40				23.43	4.52	5.18	22.92	4.86	4.72	22.49	5.17	4.35	22.03	5.47	4.03	21.46	5.76	3.73	20.69	6.05	3.42			
42				23.42	4.47	5.24	22.93	4.82	4.76	22.50	5.15	4.37	22.05	5.45	4.05	21.49	5.74	3.74	20.73	6.04	3.43			

HEATING MODE


COOLING MODE



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

## DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Ph	Heating capacity (kW)
Pe	Input power (kW)
	ATTENTION operation with DCPX
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.19. ANK 085 H (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	8.19	2.81	2.91	8.39	3.48	2.41	8.18	4.00	2.05	7.63	4.40	1.73	6.79	4.73	1.44	5.74	5.04	1.14						
-18	8.66	2.86	3.03	8.87	3.52	2.52	8.70	4.03	2.16	8.19	4.42	1.85	7.42	4.76	1.56	6.45	5.07	1.27						
-16	9.15	2.91	3.14	9.37	3.56	2.63	9.23	4.05	2.28	8.77	4.44	1.98	8.06	4.77	1.69	7.17	5.08	1.41						
-14	9.65	2.95	3.27	9.88	3.58	2.76	9.76	4.07	2.40	9.34	4.46	2.09	8.69	4.79	1.81	7.87	5.10	1.54	6.93	5.44	1.27			
-12	10.14	2.98	3.40	10.38	3.61	2.88	10.28	4.09	2.51	9.89	4.47	2.21	9.30	4.80	1.94	8.54	5.11	1.67	7.69	5.46	1.41			
-10	10.62	3.01	3.53	10.86	3.63	2.99	10.77	4.10	2.63	10.42	4.48	2.33	9.87	4.80	2.06	9.18	5.12	1.79	8.41	5.47	1.54	7.63	5.91	1.29
-8	11.07	3.04	3.64	11.30	3.65	3.10	11.23	4.12	2.73	10.91	4.49	2.43	10.40	4.81	2.16	9.77	5.13	1.90	9.07	5.49	1.65	8.38	5.93	1.41
-7	11.28	3.06	3.69	11.51	3.66	3.14	11.44	4.12	2.78	11.13	4.50	2.47	10.64	4.82	2.21	10.04	5.14	1.95	9.38	5.50	1.71	8.73	5.94	1.47
-6	11.48	3.07	3.74	11.70	3.67	3.19	11.64	4.13	2.82	11.34	4.50	2.52	10.87	4.82	2.26	10.29	5.14	2.00	9.67	5.51	1.75	9.06	5.96	1.52
-4	11.83	3.10	3.82	12.05	3.69	3.27	11.98	4.15	2.89	11.70	4.52	2.59	11.27	4.84	2.33	10.75	5.16	2.08	10.19	5.53	1.84	9.67	5.99	1.61
-2	12.13	3.14	3.86	12.32	3.72	3.31	12.26	4.17	2.94	11.99	4.53	2.65	11.59	4.86	2.38	11.11	5.18	2.14	10.62	5.56	1.91	10.17	6.02	1.69
0	12.34	3.18	3.88	12.52	3.75	3.34	12.45	4.20	2.96	12.19	4.56	2.67	11.82	4.88	2.42	11.38	5.21	2.18	10.95	5.59	1.96	10.57	6.07	1.74
1	12.42	3.20	3.88	12.58	3.77	3.34	12.51	4.21	2.97	12.26	4.57	2.68	11.89	4.90	2.43	11.47	5.23	2.19	11.07	5.61	1.97	10.73	6.09	1.76
2				12.51	4.22	2.96	12.66	4.23	2.99	12.32	4.59	2.68	12.02	4.84	2.48	11.64	5.25	2.22	11.18	5.64	1.98	10.55	6.12	1.72
4				15.61	3.84	4.07	15.15	4.27	3.55	14.75	4.63	3.19	14.38	4.96	2.90	13.95	5.29	2.64	13.42	5.69	2.36	12.71	6.19	2.05
6				17.79	3.89	4.57	17.28	4.33	3.99	16.85	4.68	3.60	16.42	5.01	3.28	15.94	5.35	2.98	15.33	5.76	2.66	14.55	6.26	2.32
7				18.46	4.36	4.23	18.23	4.36	4.18	17.78	4.71	3.77	17.49	5.07	3.45	16.81	5.39	3.12	16.18	5.79	2.79	15.36	6.31	2.43
8				19.63	4.14	4.74	19.10	4.49	4.25	18.63	4.82	3.87	18.16	5.15	3.53	17.62	5.50	3.20	16.96	5.87	2.89	16.11	6.30	2.56
10				21.18	4.33	4.89	20.63	4.66	4.43	20.13	4.98	4.04	19.62	5.30	3.70	19.03	5.63	3.38	18.32	5.99	3.06	17.41	6.39	2.72
12				22.46	4.50	4.99	21.89	4.82	4.54	21.37	5.13	4.17	20.83	5.43	3.84	20.21	5.74	3.52	19.45	6.08	3.20	18.49	6.47	2.86
14				23.50	4.65	5.05	22.92	4.96	4.62	22.39	5.26	4.26	21.82	5.55	3.93	21.17	5.85	3.62	20.38	6.17	3.30	19.37	6.54	2.96
16				24.07	4.78	5.04	23.59	5.08	4.64	23.14	5.37	4.31	22.64	5.65	4.01	22.05	5.93	3.72	21.29	6.25	3.41	20.30	6.60	3.08
18				24.76	4.89	5.06	24.30	5.19	4.68	23.86	5.47	4.36	23.37	5.74	4.07	22.78	6.01	3.79	22.01	6.31	3.49	21.00	6.65	3.16
20				25.33	4.98	5.09	24.89	5.28	4.71	24.46	5.55	4.41	23.97	5.81	4.13	23.37	6.08	3.84	22.59	6.37	3.55	21.57	6.69	3.22
22				25.78	5.06	5.09	25.36	5.35	4.74	24.94	5.62	4.44	24.45	5.88	4.16	23.85	6.14	3.88	23.06	6.42	3.59	22.02	6.73	3.27
24				26.14	5.12	5.11	25.73	5.42	4.75	25.32	5.68	4.46	24.83	5.93	4.19	24.22	6.19	3.91	23.42	6.46	3.63	22.36	6.76	3.31
26				26.42	5.17	5.11	26.02	5.47	4.76	25.61	5.73	4.47	25.12	5.98	4.20	24.50	6.23	3.93	23.68	6.50	3.64			
28				26.63	5.21	5.11	26.24	5.51	4.76	25.83	5.77	4.48	25.34	6.02	4.21	24.70	6.27	3.94	23.86	6.53	3.65			
30				26.78	5.24	5.11	26.40	5.54	4.77	25.98	5.80	4.48	25.49	6.05	4.21	24.84	6.30	3.94	23.98	6.56	3.66			
32				26.89	5.25	5.12	26.51	5.56	4.77	26.10	5.83	4.48	25.59	6.08	4.21	24.92	6.33	3.94	24.04	6.59	3.65			
34				26.98	5.26	5.13	26.59	5.57	4.77	26.17	5.85	4.47	25.65	6.11	4.20	24.97	6.36	3.93	24.06	6.62	3.63			
36				27.04	5.26	5.14	26.66	5.58	4.78	26.23	5.87	4.47	25.69	6.13	4.19	24.99	6.38	3.92	24.05	6.64	3.62			
38				27.11	5.25	5.16	26.72	5.59	4.78	26.28	5.88	4.47	25.73	6.15	4.18	25.00	6.41	3.90	24.03	6.67	3.60			
40				27.18	5.24	5.19	26.79	5.59	4.79	26.34	5.89	4.47	25.77	6.17	4.18	25.01	6.44	3.88	24.01	6.71	3.58			
42				27.28	5.22	5.23	26.88	5.59	4.81	26.42	5.90	4.48	25.82	6.19	4.17	25.04	6.47	3.87	24.00	6.74	3.56			



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Ph	Heating capacity (kW)
Pe	Input power (kW)
	<b>ATTENTION operation with DCPX</b>
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 10.20. ANK 085 HP | HA (400V/3N/50Hz) Heating capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	25			30			35			40			45			50			55			60		
	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP	Ph (kW)	Pe (kW)	COP
-20	8.08	2.86	2.83	8.27	3.54	2.34	8.07	4.07	1.98	7.52	4.48	1.68	6.70	4.82	1.39	5.66	5.13	1.10						
-18	8.54	2.91	2.93	8.75	3.59	2.44	8.58	4.10	2.09	8.08	4.50	1.80	7.32	4.84	1.51	6.36	5.16	1.23						
-16	9.02	2.96	3.05	9.25	3.62	2.56	9.10	4.13	2.20	8.65	4.52	1.91	7.95	4.86	1.64	7.07	5.18	1.36						
-14	9.51	3.00	3.17	9.74	3.65	2.67	9.62	4.15	2.32	9.21	4.54	2.03	8.57	4.87	1.76	7.76	5.19	1.50	6.84	5.54	1.23			
-12	10.00	3.03	3.30	10.24	3.67	2.79	10.13	4.16	2.44	9.76	4.55	2.15	9.17	4.88	1.88	8.42	5.20	1.62	7.59	5.55	1.37			
-10	10.47	3.07	3.41	10.71	3.69	2.90	10.62	4.18	2.54	10.28	4.56	2.25	9.73	4.89	1.99	9.05	5.21	1.74	8.30	5.57	1.49	7.52	6.01	1.25
-8	10.91	3.10	3.52	11.15	3.71	3.01	11.07	4.19	2.64	10.76	4.57	2.35	10.26	4.90	2.09	9.63	5.22	1.84	8.95	5.58	1.60	8.27	6.04	1.37
-7	11.12	3.11	3.58	11.35	3.72	3.05	11.28	4.20	2.69	10.98	4.58	2.40	10.50	4.90	2.14	9.90	5.23	1.89	9.25	5.59	1.65	8.61	6.05	1.42
-6	11.32	3.13	3.62	11.54	3.74	3.09	11.48	4.21	2.73	11.18	4.58	2.44	10.72	4.91	2.18	10.15	5.23	1.94	9.54	5.60	1.70	8.94	6.06	1.48
-4	11.67	3.16	3.69	11.88	3.76	3.16	11.82	4.22	2.80	11.54	4.60	2.51	11.12	4.92	2.26	10.60	5.25	2.02	10.05	5.63	1.79	9.53	6.09	1.56
-2	11.96	3.19	3.75	12.15	3.79	3.21	12.09	4.24	2.85	11.83	4.61	2.57	11.43	4.94	2.31	10.96	5.27	2.08	10.47	5.65	1.85	10.03	6.13	1.64
0	12.17	3.23	3.77	12.35	3.82	3.23	12.28	4.27	2.88	12.03	4.64	2.59	11.65	4.97	2.34	11.22	5.30	2.12	10.80	5.69	1.90	10.43	6.18	1.69
1	12.25	3.25	3.77	12.41	3.84	3.23	12.34	4.29	2.88	12.09	4.65	2.60	11.73	4.98	2.36	11.32	5.32	2.13	10.91	5.71	1.91	10.58	6.20	1.71
2				12.26	4.23	2.90	12.48	4.30	2.90	12.15	4.67	2.60	11.83	4.93	2.40	11.48	5.34	2.15	11.02	5.74	1.92	10.41	6.23	1.67
4				15.40	3.90	3.95	14.94	4.35	3.43	14.55	4.71	3.09	14.18	5.04	2.81	13.76	5.39	2.55	13.23	5.79	2.28	12.53	6.30	1.99
6				17.54	3.96	4.43	17.05	4.40	3.88	16.62	4.77	3.48	16.19	5.10	3.17	15.72	5.45	2.88	15.12	5.86	2.58	14.35	6.38	2.25
7				18.31	4.45	4.11	17.98	4.43	4.06	17.53	4.80	3.65	17.25	5.16	3.34	16.58	5.48	3.03	15.96	5.90	2.71	15.15	6.42	2.36
8				19.36	4.21	4.60	18.84	4.57	4.12	18.37	4.90	3.75	17.91	5.24	3.42	17.38	5.59	3.11	16.73	5.98	2.80	15.89	6.41	2.48
10				20.89	4.41	4.74	20.34	4.75	4.28	19.85	5.07	3.92	19.35	5.39	3.59	18.77	5.73	3.28	18.07	6.09	2.97	17.17	6.50	2.64
12				22.15	4.58	4.84	21.59	4.91	4.40	21.07	5.22	4.04	20.54	5.53	3.71	19.93	5.85	3.41	19.18	6.19	3.10	18.23	6.58	2.77
14				23.18	4.73	4.90	22.61	5.05	4.48	22.08	5.35	4.13	21.52	5.64	3.82	20.88	5.95	3.51	20.10	6.28	3.20	19.10	6.65	2.87
16				23.74	4.86	4.88	23.27	5.17	4.50	22.82	5.46	4.18	22.33	5.75	3.88	21.74	6.04	3.60	20.99	6.36	3.30	20.02	6.71	2.98
18				24.42	4.97	4.91	23.97	5.28	4.54	23.53	5.56	4.23	23.05	5.84	3.95	22.46	6.12	3.67	21.70	6.42	3.38	20.72	6.76	3.07
20				24.98	5.07	4.93	24.54	5.37	4.57	24.12	5.65	4.27	23.64	5.91	4.00	23.05	6.19	3.72	22.28	6.48	3.44	21.28	6.81	3.12
22				25.43	5.15	4.94	25.01	5.45	4.59	24.59	5.72	4.30	24.12	5.98	4.03	23.52	6.25	3.76	22.74	6.53	3.48	21.72	6.85	3.17
24				25.78	5.21	4.95	25.38	5.51	4.61	24.97	5.78	4.32	24.49	6.04	4.05	23.89	6.30	3.79	23.09	6.57	3.51	22.05	6.88	3.20
26				26.06	5.26	4.95	25.66	5.56	4.62	25.26	5.83	4.33	24.78	6.09	4.07	24.16	6.34	3.81	23.35	6.61	3.53			
28				26.26	5.30	4.95	25.88	5.60	4.62	25.47	5.87	4.34	24.99	6.13	4.08	24.36	6.38	3.82	23.53	6.65	3.54			
30				26.42	5.33	4.96	26.03	5.64	4.62	25.63	5.91	4.34	25.14	6.16	4.08	24.50	6.41	3.82	23.65	6.68	3.54			
32				26.53	5.35	4.96	26.15	5.66	4.62	25.74	5.93	4.34	25.24	6.19	4.08	24.58	6.44	3.82	23.71	6.70	3.54			
34				26.61	5.35	4.97	26.23	5.67	4.63	25.81	5.96	4.33	25.30	6.22	4.07	24.62	6.47	3.81	23.73	6.73	3.53			
36				26.67	5.35	4.99	26.29	5.68	4.63	25.87	5.97	4.33	25.34	6.24	4.06	24.65	6.50	3.79	23.72	6.76	3.51			
38				26.74	5.35	5.00	26.35	5.69	4.63	25.92	5.99	4.33	25.38	6.26	4.05	24.66	6.52	3.78	23.70	6.79	3.49			
40				26.81	5.33	5.03	26.42	5.69	4.64	25.98	6.00	4.33	25.41	6.28	4.05	24.67	6.55	3.77	23.68	6.83	3.47			
42				26.91	5.32	5.06	26.51	5.68	4.67	26.05	6.01	4.33	25.47	6.30	4.04	24.70	6.58	3.75	23.67	6.86	3.45			

HEATING MODE


COOLING MODE



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.2)

DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Ph	Heating capacity (kW)
Pe	Input power (kW)
	ATTENTION operation with DCPX
TAE	External air temperature (°C) d.b.



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0.99	1	1.01	1.02
Input power correction factors	1.01	1	0.98	0.96

## 11. EFFICIENCIES AND TEMPERATURES DIFFERENT FROM THE NOMINAL OPERATING VALUE IN COOLING MODE

## 11.1. ANK 020 H (230V/1/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	6.40	3.39	1.89	7.11	3.41	2.09	8.22	3.45	2.38	9.29	3.48	2.67	9.72	3.50	2.78	10.39	3.52	2.95	11.60	3.56	3.26	12.41	3.58	3.47
-8	6.25	3.07	2.04	6.97	3.09	2.26	8.08	3.13	2.58	9.15	3.16	2.90	9.58	3.17	3.02	10.25	3.20	3.20	11.46	3.24	3.54	12.27	3.26	3.76
-6	6.12	2.78	2.20	6.84	2.80	2.44	7.95	2.84	2.80	9.02	2.88	3.13	9.45	2.89	3.27	10.12	2.91	3.48	11.33	2.95	3.84	12.13	2.98	4.07
-4	6.00	2.53	2.37	6.71	2.55	2.63	7.82	2.59	3.02	8.89	2.63	3.38	9.32	2.64	3.53	9.99	2.66	3.76	11.20	2.70	4.15	12.00	2.73	4.40
-2	5.88	2.31	2.55	6.59	2.34	2.82	7.70	2.38	3.24	8.77	2.41	3.64	9.20	2.42	3.80	9.87	2.45	4.03	11.08	2.49	4.45	11.88	2.52	4.71
0	5.76	2.13	2.70	6.48	2.15	3.01	7.59	2.19	3.47	8.66	2.23	3.88	9.09	2.24	4.06	9.76	2.26	4.32	10.96	2.30	4.77	11.77	2.33	5.05
2	5.65	1.97	2.87	6.37	2.00	3.19	7.48	2.04	3.67	8.54	2.07	4.13	8.98	2.09	4.30	9.64	2.11	4.57	10.85	2.15	5.05	11.65	2.18	5.34
4	5.54	1.85	2.99	6.26	1.87	3.35	7.37	1.91	3.86	8.44	1.95	4.33	8.87	1.96	4.53	9.54	1.98	4.82	10.74	2.03	5.29	11.54	2.05	5.63
6	5.44	1.75	3.11	6.15	1.77	3.47	7.26	1.81	4.01	8.33	1.85	4.50	8.76	1.86	4.71	9.43	1.89	4.99	10.63	1.93	5.51	11.44	1.96	5.84
8	5.33	1.67	3.19	6.05	1.70	3.56	7.16	1.74	4.11	8.22	1.77	4.64	8.66	1.79	4.84	9.32	1.81	5.15	10.53	1.85	5.69	11.33	1.88	6.03
10	5.23	1.62	3.23	5.94	1.65	3.60	7.05	1.69	4.17	8.12	1.72	4.72	8.55	1.74	4.91	9.22	1.76	5.24	10.42	1.80	5.79	11.23	1.83	6.14
12	5.12	1.59	3.22	5.84	1.62	3.60	6.95	1.66	4.19	8.01	1.69	4.74	8.45	1.71	4.94	9.11	1.73	5.27	10.32	1.78	5.80	11.12	1.80	6.18
14	5.02	1.58	3.18	5.73	1.61	3.56	6.84	1.65	4.15	7.91	1.69	4.68	8.34	1.70	4.91	9.00	1.72	5.23	10.21	1.77	5.77	11.01	1.79	6.15
16	4.91	1.59	3.09	5.62	1.62	3.47	6.73	1.66	4.05	7.80	1.69	4.62	8.23	1.71	4.81	8.89	1.73	5.14	10.10	1.78	5.67	10.90	1.80	6.06
18	4.79	1.62	2.96	5.51	1.64	3.36	6.62	1.68	3.94	7.68	1.72	4.47	8.11	1.73	4.69	8.78	1.76	4.99	9.98	1.80	5.54	10.79	1.83	5.90
20	4.67	1.66	2.81	5.39	1.68	3.21	6.50	1.72	3.78	7.56	1.76	4.30	7.99	1.77	4.51	8.66	1.80	4.81	9.86	1.84	5.36	10.67	1.87	5.71
22	4.55	1.71	2.66	5.26	1.73	3.04	6.37	1.77	3.60	7.44	1.81	4.11	7.87	1.83	4.30	8.54	1.85	4.62	9.74	1.89	5.15	10.54	1.92	5.49
24	4.42	1.77	2.50	5.13	1.80	2.85	6.24	1.84	3.39	7.31	1.88	3.89	7.74	1.89	4.10	8.40	1.91	4.40	9.61	1.96	4.90	10.41	1.99	5.23
26	4.28	1.84	2.33	4.99	1.87	2.67	6.10	1.91	3.19	7.17	1.95	3.68	7.60	1.96	3.88	8.26	1.99	4.15	9.47	2.03	4.67	10.27	2.06	4.99
28	4.13	1.93	2.14	4.84	1.95	2.48	5.95	1.99	2.99	7.02	2.03	3.46	7.45	2.04	3.65	8.11	2.07	3.92	9.32	2.11	4.42	10.12	2.14	4.73
30	3.97	2.01	1.98	4.69	2.04	2.30	5.79	2.08	2.78	6.86	2.12	3.24	7.29	2.13	3.42	7.96	2.16	3.69	9.16	2.20	4.16	9.96	2.23	4.47
32	3.80	2.10	1.81	4.52	2.13	2.12	5.62	2.17	2.59	6.69	2.21	3.03	7.12	2.22	3.21	7.79	2.25	3.46	8.99	2.29	3.93	9.79	2.32	4.22
34	3.62	2.20	1.65	4.33	2.22	1.95	5.44	2.26	2.41	6.51	2.30	2.83	6.94	2.32	2.99	7.61	2.34	3.25	8.81	2.38	3.70	9.61	2.41	3.99
35	3.52	2.25	1.56	4.24	2.27	1.87	5.35	2.31	2.32	6.41	2.35	2.73	<b>6.82</b>	<b>2.36</b>	<b>2.89</b>	7.51	2.39	3.14	8.71	2.43	3.58	<b>9.44</b>	<b>2.48</b>	<b>3.81</b>
36	3.43	2.29	1.50	4.14	2.32	1.78	5.25	2.36	2.22	6.32	2.40	2.63	6.75	2.41	2.80	7.41	2.44	3.04	8.62	2.48	3.48	9.42	2.51	3.75
38	3.22	2.39	1.35	3.93	2.41	1.63	5.04	2.45	2.06	6.11	2.49	2.45	6.54	2.51	2.61	7.21	2.53	2.85	8.41	2.57	3.27	9.21	2.60	3.54
40	2.99	2.48	1.21	3.71	2.50	1.48	4.82	2.54	1.90	5.89	2.58	2.28	6.32	2.60	2.43	6.98	2.62	2.66	8.19	2.66	3.08	8.99	2.69	3.34
42				3.47	2.59	1.34	4.58	2.63	1.74	5.65	2.67	2.12	6.08	2.68	2.27	6.75	2.71	2.49	7.95	2.75	2.89			
44				3.22	2.67	1.21	4.33	2.71	1.60	5.39	2.75	1.96	5.82	2.76	2.11	6.49	2.79	2.33						
46							4.05	2.79	1.45	5.12	2.82	1.82	5.55	2.84	1.95	6.22	2.86	2.17						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95



## 11.2. ANK 020 HP | HA (230V/1/50Hz) Cooling capacity and input power

TAE	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	6.48	3.49	1.86	7.21	3.51	2.05	8.33	3.55	2.35	9.41	3.58	2.63	9.85	3.60	2.74	10.53	3.62	2.91	11.76	3.66	3.21	12.57	3.69	3.41
-8	6.34	3.16	2.01	7.06	3.18	2.22	8.19	3.22	2.54	9.27	3.25	2.85	9.71	3.27	2.97	10.39	3.29	3.16	11.61	3.33	3.49	12.43	3.36	3.70
-6	6.20	2.86	2.17	6.93	2.89	2.40	8.05	2.93	2.75	9.14	2.96	3.09	9.57	2.98	3.21	10.25	3.00	3.42	11.48	3.04	3.78	12.29	3.07	4.00
-4	6.08	2.60	2.34	6.80	2.63	2.59	7.93	2.67	2.97	9.01	2.70	3.34	9.45	2.72	3.47	10.12	2.74	3.69	11.35	2.78	4.08	12.16	2.81	4.33
-2	5.95	2.38	2.50	6.68	2.41	2.77	7.80	2.45	3.18	8.89	2.48	3.58	9.32	2.50	3.73	10.00	2.52	3.97	11.22	2.56	4.38	12.04	2.59	4.65
0	5.84	2.19	2.67	6.56	2.22	2.95	7.69	2.26	3.40	8.77	2.29	3.83	9.21	2.31	3.99	9.88	2.33	4.24	11.11	2.37	4.69	11.92	2.40	4.97
2	5.73	2.03	2.82	6.45	2.06	3.13	7.57	2.10	3.60	8.66	2.13	4.07	9.09	2.15	4.23	9.77	2.17	4.50	10.99	2.21	4.97	11.81	2.24	5.27
4	5.62	1.90	2.96	6.34	1.93	3.28	7.47	1.97	3.79	8.55	2.00	4.28	8.98	2.02	4.45	9.66	2.04	4.74	10.88	2.09	5.21	11.70	2.12	5.52
6	5.51	1.80	3.06	6.23	1.83	3.40	7.36	1.87	3.94	8.44	1.90	4.44	8.88	1.92	4.63	9.55	1.94	4.92	10.77	1.98	5.44	11.59	2.01	5.77
8	5.40	1.72	3.14	6.13	1.75	3.50	7.25	1.79	4.05	8.33	1.83	4.55	8.77	1.84	4.77	9.45	1.87	5.05	10.67	1.91	5.59	11.48	1.94	5.92
10	5.30	1.67	3.17	6.02	1.70	3.54	7.15	1.74	4.11	8.23	1.77	4.65	8.66	1.79	4.84	9.34	1.81	5.16	10.56	1.86	5.68	11.37	1.89	6.02
12	5.19	1.64	3.16	5.92	1.67	3.54	7.04	1.71	4.12	8.12	1.75	4.64	8.56	1.76	4.86	9.23	1.78	5.19	10.45	1.83	5.71	11.27	1.86	6.06
14	5.08	1.63	3.12	5.81	1.66	3.50	6.93	1.70	4.08	8.01	1.74	4.60	8.45	1.75	4.83	9.12	1.77	5.15	10.34	1.82	5.68	11.16	1.85	6.03
16	4.97	1.64	3.03	5.70	1.67	3.41	6.82	1.71	3.99	7.90	1.74	4.54	8.34	1.76	4.74	9.01	1.78	5.06	10.23	1.83	5.59	11.04	1.86	5.94
18	4.86	1.66	2.93	5.58	1.69	3.30	6.70	1.73	3.87	7.78	1.77	4.40	8.22	1.79	4.59	8.90	1.81	4.92	10.11	1.85	5.46	10.93	1.88	5.81
20	4.73	1.70	2.78	5.46	1.73	3.16	6.58	1.77	3.72	7.66	1.81	4.23	8.10	1.83	4.43	8.77	1.85	4.74	9.99	1.89	5.29	10.81	1.92	5.63
22	4.61	1.76	2.62	5.33	1.79	2.98	6.46	1.83	3.53	7.54	1.87	4.03	7.97	1.88	4.24	8.65	1.91	4.53	9.87	1.95	5.06	10.68	1.98	5.39
24	4.47	1.82	2.46	5.20	1.85	2.81	6.32	1.89	3.34	7.40	1.93	3.83	7.84	1.95	4.02	8.51	1.97	4.32	9.73	2.02	4.82	10.55	2.04	5.17
26	4.33	1.90	2.28	5.06	1.93	2.62	6.18	1.97	3.14	7.26	2.01	3.61	7.70	2.02	3.81	8.37	2.05	4.08	9.59	2.09	4.59	10.40	2.12	4.91
28	4.18	1.98	2.11	4.91	2.01	2.44	6.03	2.05	2.94	7.11	2.09	3.40	7.55	2.11	3.58	8.22	2.13	3.86	9.44	2.17	4.35	10.25	2.20	4.66
30	4.02	2.07	1.94	4.75	2.10	2.26	5.87	2.14	2.74	6.95	2.18	3.19	7.39	2.20	3.36	8.06	2.22	3.63	9.28	2.26	4.11	10.09	2.29	4.41
32	3.85	2.17	1.77	4.58	2.19	2.09	5.70	2.23	2.56	6.78	2.27	2.99	7.22	2.29	3.15	7.89	2.31	3.42	9.11	2.36	3.86	9.92	2.39	4.15
34	3.67	2.26	1.62	4.39	2.29	1.92	5.52	2.33	2.37	6.60	2.37	2.78	7.03	2.39	2.94	7.71	2.41	3.20	8.93	2.45	3.64	9.74	2.48	3.93
35	3.57	2.31	1.55	4.30	2.34	1.84	5.42	2.38	2.28	6.50	2.42	2.69	<b>6.91</b>	<b>2.43</b>	<b>2.84</b>	7.61	2.46	3.09	8.83	2.50	3.53	<b>9.57</b>	<b>2.51</b>	<b>3.81</b>
36	3.47	2.36	1.47	4.20	2.39	1.76	5.32	2.43	2.19	6.40	2.47	2.59	6.84	2.48	2.76	7.51	2.51	2.99	8.73	2.55	3.42	9.54	2.58	3.70
38	3.26	2.46	1.33	3.99	2.48	1.61	5.11	2.53	2.02	6.19	2.56	2.42	6.63	2.58	2.57	7.30	2.60	2.81	8.52	2.65	3.22	9.33	2.68	3.48
40	3.03	2.55	1.19	3.76	2.58	1.46	4.88	2.62	1.86	5.96	2.66	2.24	6.40	2.67	2.40	7.08	2.70	2.62	8.29	2.74	3.03	9.11	2.77	3.29
42				3.52	2.67	1.32	4.64	2.71	1.71	5.72	2.75	2.08	6.16	2.76	2.23	6.83	2.79	2.45	8.05	2.83	2.84			
44				3.26	2.75	1.19	4.38	2.79	1.57	5.46	2.83	1.93	5.90	2.85	2.07	6.58	2.87	2.29						
46							4.11	2.87	1.43	5.19	2.91	1.78	5.63	2.92	1.93	6.30	2.95	2.14						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.3. ANK 020 H (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	6.34	3.34	1.90	7.05	3.37	2.09	8.15	3.40	2.40	9.21	3.44	2.68	9.64	3.45	2.79	10.30	3.47	2.97	11.50	3.51	3.28	12.30	3.54	3.47
-8	6.20	3.03	2.05	6.91	3.05	2.27	8.01	3.09	2.59	9.07	3.12	2.91	9.50	3.13	3.04	10.16	3.16	3.22	11.36	3.19	3.56	12.16	3.22	3.78
-6	6.07	2.74	2.22	6.78	2.77	2.45	7.88	2.80	2.81	8.94	2.84	3.15	9.37	2.85	3.29	10.03	2.87	3.49	11.23	2.91	3.86	12.02	2.94	4.09
-4	5.94	2.50	2.38	6.65	2.52	2.64	7.75	2.56	3.03	8.81	2.59	3.40	9.24	2.61	3.54	9.90	2.63	3.76	11.10	2.67	4.16	11.90	2.70	4.41
-2	5.82	2.28	2.55	6.53	2.31	2.83	7.63	2.34	3.26	8.69	2.38	3.65	9.12	2.39	3.82	9.78	2.42	4.04	10.98	2.46	4.46	11.78	2.48	4.75
0	5.71	2.10	2.72	6.42	2.13	3.01	7.52	2.16	3.48	8.58	2.20	3.90	9.01	2.21	4.08	9.67	2.23	4.34	10.86	2.27	4.78	11.66	2.30	5.07
2	5.60	1.95	2.87	6.31	1.97	3.20	7.41	2.01	3.69	8.47	2.05	4.13	8.90	2.06	4.32	9.56	2.08	4.60	10.75	2.12	5.07	11.55	2.15	5.37
4	5.49	1.82	3.02	6.20	1.85	3.35	7.30	1.89	3.86	8.36	1.92	4.35	8.79	1.94	4.53	9.45	1.96	4.82	10.65	2.00	5.33	11.44	2.03	5.64
6	5.39	1.73	3.12	6.10	1.75	3.49	7.20	1.79	4.02	8.26	1.82	4.54	8.68	1.84	4.72	9.35	1.86	5.03	10.54	1.90	5.55	11.34	1.93	5.88
8	5.29	1.65	3.21	6.00	1.68	3.57	7.09	1.72	4.12	8.15	1.75	4.66	8.58	1.77	4.85	9.24	1.79	5.16	10.44	1.83	5.70	11.23	1.86	6.04
10	5.18	1.60	3.24	5.89	1.63	3.61	6.99	1.67	4.19	8.05	1.70	4.74	8.48	1.72	4.93	9.14	1.74	5.25	10.33	1.78	5.80	11.13	1.81	6.15
12	5.08	1.57	3.24	5.79	1.60	3.62	6.89	1.64	4.20	7.94	1.67	4.75	8.37	1.69	4.95	9.03	1.71	5.28	10.23	1.75	5.85	11.02	1.78	6.19
14	4.97	1.56	3.19	5.68	1.59	3.57	6.78	1.63	4.16	7.84	1.66	4.72	8.26	1.68	4.92	8.93	1.70	5.25	10.12	1.74	5.82	10.91	1.77	6.16
16	4.86	1.57	3.10	5.57	1.60	3.48	6.67	1.64	4.07	7.73	1.67	4.63	8.15	1.69	4.82	8.82	1.71	5.16	10.01	1.75	5.72	10.80	1.78	6.07
18	4.75	1.60	2.97	5.46	1.62	3.37	6.56	1.66	3.95	7.61	1.70	4.48	8.04	1.71	4.70	8.70	1.74	5.00	9.89	1.78	5.56	10.69	1.81	5.91
20	4.63	1.63	2.84	5.34	1.66	3.22	6.44	1.70	3.79	7.50	1.74	4.31	7.92	1.75	4.53	8.58	1.77	4.85	9.78	1.82	5.37	10.57	1.85	5.71
22	4.51	1.69	2.67	5.22	1.71	3.05	6.32	1.75	3.61	7.37	1.79	4.12	7.80	1.80	4.33	8.46	1.83	4.62	9.65	1.87	5.16	10.45	1.90	5.50
24	4.38	1.75	2.50	5.09	1.77	2.88	6.18	1.81	3.41	7.24	1.85	3.91	7.67	1.87	4.10	8.33	1.89	4.41	9.52	1.93	4.93	10.32	1.96	5.27
26	4.24	1.82	2.33	4.95	1.85	2.68	6.05	1.89	3.20	7.10	1.92	3.70	7.53	1.94	3.88	8.19	1.96	4.18	9.38	2.00	4.69	10.18	2.03	5.01
28	4.09	1.90	2.15	4.80	1.93	2.49	5.90	1.97	2.99	6.96	2.00	3.48	7.38	2.02	3.65	8.04	2.04	3.94	9.24	2.08	4.44	10.03	2.11	4.75
30	3.93	1.99	1.97	4.64	2.01	2.31	5.74	2.05	2.80	6.80	2.09	3.25	7.23	2.10	3.44	7.89	2.13	3.70	9.08	2.17	4.18	9.87	2.20	4.49
32	3.77	2.08	1.81	4.48	2.10	2.13	5.57	2.14	2.60	6.63	2.18	3.04	7.06	2.19	3.22	7.72	2.22	3.48	8.91	2.26	3.94	9.71	2.29	4.24
34	3.59	2.17	1.65	4.30	2.20	1.95	5.40	2.24	2.41	6.45	2.27	2.84	6.88	2.29	3.00	7.54	2.31	3.26	8.73	2.35	3.71	9.53	2.38	4.00
35	3.49	2.22	1.57	4.20	2.24	1.88	5.30	2.28	2.32	6.36	2.32	2.74	<b>6.76</b>	<b>2.33</b>	<b>2.90</b>	7.45	2.36	3.16	8.64	2.40	3.60	<b>9.36</b>	<b>2.45</b>	<b>3.82</b>
36	3.39	2.26	1.50	4.10	2.29	1.79	5.20	2.33	2.23	6.26	2.37	2.64	6.69	2.38	2.81	7.35	2.40	3.06	8.54	2.45	3.49	9.33	2.48	3.76
38	3.19	2.36	1.35	3.90	2.38	1.64	5.00	2.42	2.07	6.05	2.46	2.46	6.48	2.47	2.62	7.14	2.50	2.86	8.33	2.54	3.28	9.13	2.57	3.55
40	2.97	2.45	1.21	3.68	2.47	1.49	4.78	2.51	1.90	5.83	2.55	2.29	6.26	2.56	2.45	6.92	2.59	2.67	8.11	2.63	3.08	8.91	2.66	3.35
42				3.44	2.56	1.34	4.54	2.60	1.75	5.60	2.63	2.13	6.03	2.65	2.28	6.69	2.67	2.51	7.88	2.71	2.91			
44				3.19	2.64	1.21	4.29	2.68	1.60	5.35	2.71	1.97	5.77	2.73	2.11	6.43	2.75	2.34						
46							4.02	2.75	1.46	5.08	2.79	1.82	5.50	2.80	1.96	6.16	2.82	2.18						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.4. ANK 020 HP | HA (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	6.41	3.46	1.85	7.13	3.48	2.05	8.25	3.52	2.34	9.32	3.56	2.62	9.75	3.57	2.73	10.42	3.59	2.90	11.64	3.63	3.21	12.45	3.66	3.40
-8	6.27	3.13	2.00	6.99	3.15	2.22	8.11	3.19	2.54	9.18	3.23	2.84	9.61	3.24	2.97	10.28	3.26	3.15	11.49	3.30	3.48	12.30	3.33	3.69
-6	6.14	2.84	2.16	6.86	2.86	2.40	7.97	2.90	2.75	9.04	2.94	3.07	9.48	2.95	3.21	10.15	2.97	3.42	11.36	3.01	3.77	12.17	3.04	4.00
-4	6.01	2.58	2.33	6.73	2.61	2.58	7.85	2.65	2.96	8.92	2.68	3.33	9.35	2.70	3.46	10.02	2.72	3.68	11.23	2.76	4.07	12.04	2.79	4.32
-2	5.89	2.36	2.50	6.61	2.39	2.77	7.72	2.43	3.18	8.80	2.46	3.58	9.23	2.48	3.72	9.90	2.50	3.96	11.11	2.54	4.37	11.92	2.57	4.64
0	5.78	2.17	2.66	6.50	2.20	2.95	7.61	2.24	3.40	8.68	2.27	3.82	9.11	2.29	3.98	9.78	2.31	4.23	10.99	2.35	4.68	11.80	2.38	4.96
2	5.67	2.02	2.81	6.39	2.04	3.13	7.50	2.08	3.61	8.57	2.12	4.04	9.00	2.13	4.23	9.67	2.15	4.50	10.88	2.20	4.95	11.69	2.23	5.24
4	5.56	1.89	2.94	6.28	1.91	3.29	7.39	1.95	3.79	8.46	1.99	4.25	8.89	2.00	4.45	9.56	2.03	4.71	10.77	2.07	5.20	11.58	2.10	5.51
6	5.45	1.79	3.04	6.17	1.81	3.41	7.28	1.85	3.94	8.35	1.89	4.42	8.79	1.90	4.63	9.46	1.93	4.90	10.66	1.97	5.41	11.47	2.00	5.74
8	5.35	1.71	3.13	6.07	1.74	3.49	7.18	1.77	4.06	8.25	1.81	4.56	8.68	1.83	4.74	9.35	1.85	5.05	10.56	1.89	5.59	11.37	1.92	5.92
10	5.24	1.66	3.16	5.96	1.68	3.55	7.07	1.72	4.11	8.14	1.76	4.63	8.58	1.78	4.82	9.25	1.80	5.14	10.45	1.84	5.68	11.26	1.87	6.02
12	5.14	1.63	3.15	5.86	1.65	3.55	6.97	1.69	4.12	8.04	1.73	4.65	8.47	1.75	4.84	9.14	1.77	5.16	10.35	1.81	5.72	11.15	1.84	6.06
14	5.03	1.62	3.10	5.75	1.64	3.51	6.86	1.68	4.08	7.93	1.72	4.61	8.36	1.74	4.80	9.03	1.76	5.13	10.24	1.80	5.69	11.04	1.83	6.03
16	4.92	1.63	3.02	5.64	1.65	3.42	6.75	1.69	3.99	7.82	1.73	4.52	8.25	1.75	4.71	8.92	1.77	5.04	10.13	1.81	5.60	10.93	1.84	5.94
18	4.81	1.65	2.92	5.52	1.68	3.29	6.63	1.72	3.85	7.70	1.76	4.38	8.14	1.77	4.60	8.81	1.80	4.89	10.01	1.84	5.44	10.82	1.87	5.79
20	4.69	1.69	2.78	5.40	1.72	3.14	6.52	1.76	3.70	7.58	1.80	4.21	8.02	1.81	4.43	8.69	1.84	4.72	9.89	1.88	5.26	10.70	1.91	5.60
22	4.56	1.74	2.62	5.28	1.77	2.98	6.39	1.81	3.53	7.46	1.85	4.03	7.89	1.87	4.22	8.56	1.89	4.53	9.77	1.93	5.06	10.57	1.96	5.39
24	4.43	1.81	2.45	5.15	1.84	2.80	6.26	1.88	3.33	7.33	1.92	3.82	7.76	1.93	4.02	8.43	1.95	4.32	9.63	2.00	4.82	10.44	2.03	5.14
26	4.29	1.88	2.28	5.01	1.91	2.62	6.12	1.95	3.14	7.19	1.99	3.61	7.62	2.01	3.79	8.29	2.03	4.08	9.49	2.07	4.58	10.30	2.10	4.90
28	4.14	1.97	2.10	4.86	1.99	2.44	5.97	2.03	2.94	7.04	2.07	3.40	7.47	2.09	3.57	8.14	2.11	3.86	9.34	2.16	4.32	10.15	2.19	4.63
30	3.98	2.06	1.93	4.70	2.08	2.26	5.81	2.12	2.74	6.88	2.16	3.19	7.31	2.18	3.35	7.98	2.20	3.63	9.19	2.25	4.08	9.99	2.27	4.40
32	3.81	2.15	1.77	4.53	2.18	2.08	5.64	2.22	2.54	6.71	2.25	2.98	7.14	2.27	3.15	7.81	2.29	3.41	9.02	2.34	3.85	9.82	2.37	4.14
34	3.63	2.24	1.62	4.35	2.27	1.92	5.46	2.31	2.36	6.53	2.35	2.78	6.96	2.37	2.94	7.63	2.39	3.19	8.83	2.43	3.63	9.64	2.46	3.92
35	3.53	2.29	1.54	4.25	2.32	1.83	5.36	2.36	2.27	6.43	2.40	2.68	<b>6.84</b>	<b>2.41</b>	<b>2.84</b>	7.53	2.44	3.09	8.74	2.48	3.52	<b>9.48</b>	<b>2.48</b>	<b>3.82</b>
36	3.44	2.34	1.47	4.15	2.37	1.75	5.26	2.41	2.18	6.33	2.45	2.58	6.77	2.46	2.75	7.43	2.49	2.98	8.64	2.53	3.42	9.44	2.56	3.69
38	3.23	2.44	1.32	3.95	2.46	1.61	5.06	2.50	2.02	6.13	2.54	2.41	6.56	2.56	2.56	7.23	2.58	2.80	8.43	2.63	3.21	9.24	2.66	3.47
40	3.00	2.53	1.19	3.72	2.56	1.45	4.83	2.60	1.86	5.90	2.64	2.23	6.34	2.65	2.39	7.00	2.68	2.61	8.21	2.72	3.02	9.01	2.75	3.28
42				3.48	2.65	1.31	4.60	2.69	1.71	5.66	2.73	2.07	6.10	2.74	2.23	6.77	2.76	2.45	7.97	2.81	2.84			
44				3.23	2.73	1.18	4.34	2.77	1.57	5.41	2.81	1.93	5.84	2.82	2.07	6.51	2.85	2.28						
46							4.07	2.84	1.43	5.14	2.88	1.78	5.57	2.90	1.92	6.24	2.92	2.14						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.5. ANK 030 H (230V/1/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	7.64	4.05	1.89	8.50	4.08	2.08	9.83	4.12	2.39	11.10	4.16	2.67	11.62	4.18	2.78	12.42	4.20	2.96	13.86	4.25	3.26	14.83	4.28	3.46
-8	7.47	3.66	2.04	8.33	3.69	2.26	9.66	3.73	2.59	10.94	3.78	2.89	11.45	3.79	3.02	12.25	3.82	3.21	13.69	3.87	3.54	14.66	3.90	3.76
-6	7.32	3.32	2.20	8.17	3.35	2.44	9.50	3.39	2.80	10.78	3.44	3.13	11.29	3.45	3.27	12.09	3.48	3.47	13.53	3.53	3.83	14.50	3.56	4.07
-4	7.17	3.02	2.37	8.02	3.05	2.63	9.35	3.10	3.02	10.62	3.14	3.38	11.14	3.15	3.54	11.94	3.18	3.75	13.38	3.23	4.14	14.34	3.26	4.40
-2	7.02	2.76	2.54	7.88	2.79	2.82	9.20	2.84	3.24	10.48	2.88	3.64	11.00	2.90	3.79	11.80	2.92	4.04	13.24	2.97	4.46	14.20	3.01	4.72
0	6.89	2.54	2.71	7.74	2.57	3.01	9.07	2.62	3.46	10.34	2.66	3.89	10.86	2.68	4.05	11.66	2.70	4.32	13.10	2.75	4.76	14.06	2.79	5.04
2	6.75	2.36	2.86	7.61	2.39	3.18	8.93	2.43	3.67	10.21	2.48	4.12	10.73	2.49	4.31	11.52	2.52	4.57	12.96	2.57	5.04	13.93	2.60	5.36
4	6.62	2.21	3.00	7.48	2.24	3.34	8.81	2.28	3.86	10.08	2.33	4.33	10.60	2.34	4.53	11.39	2.37	4.81	12.83	2.42	5.30	13.80	2.45	5.63
6	6.50	2.09	3.11	7.35	2.12	3.47	8.68	2.17	4.00	9.95	2.21	4.50	10.47	2.23	4.70	11.27	2.25	5.01	12.71	2.30	5.53	13.67	2.34	5.84
8	6.37	2.00	3.19	7.23	2.03	3.56	8.55	2.08	4.11	9.83	2.12	4.64	10.34	2.14	4.83	11.14	2.17	5.13	12.58	2.22	5.67	13.54	2.25	6.02
10	6.25	1.94	3.22	7.10	1.97	3.60	8.43	2.02	4.17	9.70	2.06	4.71	10.22	2.08	4.91	11.02	2.11	5.22	12.46	2.16	5.77	13.42	2.19	6.13
12	6.12	1.90	3.22	6.98	1.93	3.62	8.30	1.98	4.19	9.58	2.03	4.72	10.09	2.04	4.95	10.89	2.07	5.26	12.33	2.12	5.82	13.29	2.16	6.15
14	5.99	1.89	3.17	6.85	1.92	3.57	8.17	1.97	4.15	9.45	2.01	4.70	9.96	2.03	4.91	10.76	2.06	5.22	12.20	2.11	5.78	13.16	2.14	6.15
16	5.86	1.90	3.08	6.72	1.93	3.48	8.04	1.98	4.06	9.32	2.02	4.61	9.83	2.04	4.82	10.63	2.07	5.14	12.07	2.12	5.69	13.03	2.16	6.03
18	5.73	1.93	2.97	6.58	1.96	3.36	7.91	2.01	3.94	9.18	2.05	4.48	9.70	2.07	4.69	10.49	2.10	5.00	11.93	2.15	5.55	12.89	2.19	5.89
20	5.58	1.98	2.82	6.44	2.01	3.20	7.76	2.06	3.77	9.04	2.10	4.30	9.55	2.12	4.50	10.35	2.15	4.81	11.79	2.20	5.36	12.75	2.23	5.72
22	5.43	2.04	2.66	6.29	2.07	3.04	7.61	2.12	3.59	8.89	2.16	4.12	9.40	2.18	4.31	10.20	2.21	4.62	11.64	2.26	5.15	12.60	2.30	5.48
24	5.28	2.12	2.49	6.13	2.15	2.85	7.46	2.20	3.39	8.73	2.24	3.90	9.25	2.26	4.09	10.04	2.29	4.38	11.48	2.34	4.91	12.44	2.37	5.25
26	5.11	2.20	2.32	5.97	2.24	2.67	7.29	2.28	3.20	8.56	2.33	3.67	9.08	2.35	3.86	9.87	2.37	4.16	11.31	2.43	4.65	12.27	2.46	4.99
28	4.93	2.30	2.14	5.79	2.33	2.48	7.11	2.38	2.99	8.39	2.43	3.45	8.90	2.44	3.65	9.70	2.47	3.93	11.13	2.52	4.42	12.09	2.56	4.72
30	4.74	2.40	1.98	5.60	2.44	2.30	6.92	2.48	2.79	8.20	2.53	3.24	8.71	2.55	3.42	9.51	2.58	3.69	10.94	2.63	4.16	11.90	2.66	4.47
32	4.54	2.51	1.81	5.40	2.55	2.12	6.72	2.59	2.59	7.99	2.64	3.03	8.51	2.66	3.20	9.31	2.68	3.47	10.74	2.74	3.92	11.70	2.77	4.22
34	4.32	2.63	1.64	5.18	2.66	1.95	6.50	2.71	2.40	7.78	2.75	2.83	8.29	2.77	2.99	9.09	2.80	3.25	10.53	2.85	3.69	11.49	2.88	3.99
35	4.21	2.68	1.57	5.07	2.71	1.87	6.39	2.76	2.32	7.67	2.81	2.73	<b>8.15</b>	<b>2.82</b>	<b>2.89</b>	8.98	2.85	3.15	10.41	2.90	3.59	<b>11.30</b>	<b>2.95</b>	<b>3.82</b>
36	4.09	2.74	1.49	4.95	2.77	1.79	6.27	2.82	2.22	7.55	2.86	2.64	8.06	2.88	2.80	8.86	2.91	3.04	10.30	2.96	3.48	11.25	3.00	3.75
38	3.84	2.85	1.35	4.70	2.88	1.63	6.03	2.93	2.06	7.30	2.98	2.45	7.81	2.99	2.61	8.61	3.02	2.85	10.05	3.07	3.27	11.01	3.11	3.54
40	3.58	2.96	1.21	4.43	2.99	1.48	5.76	3.04	1.89	7.03	3.08	2.28	7.55	3.10	2.44	8.35	3.13	2.67	9.78	3.18	3.08	10.74	3.22	3.34
42				4.15	3.10	1.34	5.48	3.14	1.75	6.75	3.19	2.12	7.27	3.21	2.26	8.06	3.24	2.49	9.50	3.29	2.89			
44				3.85	3.19	1.21	5.17	3.24	1.60	6.45	3.29	1.96	6.96	3.30	2.11	7.76	3.33	2.33						
46							4.85	3.33	1.46	6.12	3.37	1.82	6.64	3.39	1.96	7.43	3.42	2.17						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.6. ANK 030 HP | HA (230V/1/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	7.74	4.15	1.87	8.60	4.18	2.06	9.95	4.22	2.36	11.24	4.26	2.64	11.76	4.28	2.75	12.57	4.31	2.92	14.04	4.36	3.22	15.01	4.39	3.42
-8	7.57	3.75	2.02	8.43	3.78	2.23	9.78	3.83	2.55	11.07	3.87	2.86	11.59	3.89	2.98	12.40	3.91	3.17	13.86	3.96	3.50	14.84	4.00	3.71
-6	7.41	3.40	2.18	8.27	3.43	2.41	9.61	3.48	2.76	10.91	3.52	3.10	11.43	3.54	3.23	12.24	3.57	3.43	13.70	3.61	3.80	14.68	3.65	4.02
-4	7.25	3.10	2.34	8.12	3.13	2.59	9.46	3.17	2.98	10.75	3.22	3.34	11.28	3.23	3.49	12.09	3.26	3.71	13.55	3.31	4.09	14.52	3.34	4.35
-2	7.11	2.83	2.51	7.98	2.86	2.79	9.32	2.91	3.20	10.61	2.95	3.60	11.13	2.97	3.75	11.94	3.00	3.98	13.40	3.05	4.39	14.37	3.08	4.67
0	6.97	2.61	2.67	7.84	2.64	2.97	9.18	2.68	3.43	10.47	2.73	3.84	10.99	2.74	4.01	11.80	2.77	4.26	13.26	2.82	4.70	14.23	2.86	4.98
2	6.84	2.42	2.83	7.70	2.45	3.14	9.04	2.49	3.63	10.34	2.54	4.07	10.86	2.56	4.24	11.67	2.58	4.52	13.12	2.63	4.99	14.10	2.67	5.28
4	6.71	2.26	2.97	7.57	2.29	3.31	8.91	2.34	3.81	10.20	2.38	4.29	10.73	2.40	4.47	11.53	2.43	4.74	12.99	2.48	5.24	13.97	2.52	5.54
6	6.58	2.14	3.07	7.44	2.17	3.43	8.79	2.22	3.96	10.08	2.26	4.46	10.60	2.28	4.65	11.41	2.31	4.94	12.86	2.36	5.45	13.84	2.40	5.77
8	6.45	2.05	3.15	7.32	2.08	3.52	8.66	2.13	4.07	9.95	2.17	4.59	10.47	2.19	4.78	11.28	2.22	5.08	12.74	2.27	5.61	13.71	2.31	5.94
10	6.33	1.99	3.18	7.19	2.02	3.56	8.53	2.07	4.12	9.82	2.11	4.65	10.34	2.13	4.85	11.15	2.16	5.16	12.61	2.21	5.71	13.58	2.24	6.06
12	6.20	1.95	3.18	7.06	1.98	3.57	8.40	2.03	4.14	9.69	2.08	4.66	10.22	2.09	4.89	11.02	2.12	5.20	12.48	2.17	5.75	13.45	2.21	6.09
14	6.07	1.94	3.13	6.93	1.97	3.52	8.27	2.02	4.09	9.56	2.06	4.64	10.09	2.08	4.85	10.89	2.11	5.16	12.35	2.16	5.72	13.32	2.20	6.05
16	5.93	1.95	3.04	6.80	1.98	3.43	8.14	2.03	4.01	9.43	2.07	4.56	9.95	2.09	4.76	10.76	2.12	5.08	12.21	2.17	5.63	13.19	2.21	5.97
18	5.80	1.98	2.93	6.66	2.01	3.31	8.00	2.06	3.88	9.29	2.11	4.40	9.81	2.12	4.63	10.62	2.15	4.94	12.08	2.20	5.49	13.05	2.24	5.83
20	5.65	2.03	2.78	6.52	2.06	3.17	7.86	2.11	3.73	9.15	2.15	4.26	9.67	2.17	4.46	10.48	2.20	4.76	11.93	2.25	5.30	12.90	2.29	5.63
22	5.50	2.09	2.63	6.37	2.12	3.00	7.71	2.17	3.55	9.00	2.22	4.05	9.52	2.24	4.25	10.32	2.27	4.55	11.78	2.32	5.08	12.75	2.35	5.43
24	5.34	2.17	2.46	6.21	2.20	2.82	7.55	2.25	3.36	8.84	2.30	3.84	9.36	2.32	4.03	10.17	2.34	4.35	11.62	2.40	4.84	12.59	2.43	5.18
26	5.17	2.26	2.29	6.04	2.29	2.64	7.38	2.34	3.15	8.67	2.39	3.63	9.19	2.40	3.83	10.00	2.43	4.12	11.45	2.49	4.60	12.42	2.52	4.93
28	4.99	2.36	2.11	5.86	2.39	2.45	7.20	2.44	2.95	8.49	2.49	3.41	9.01	2.50	3.60	9.82	2.53	3.88	11.27	2.59	4.35	12.24	2.62	4.67
30	4.80	2.46	1.95	5.67	2.50	2.27	7.01	2.55	2.75	8.30	2.59	3.20	8.82	2.61	3.38	9.62	2.64	3.64	11.08	2.69	4.12	12.05	2.73	4.41
32	4.60	2.58	1.78	5.46	2.61	2.09	6.80	2.66	2.56	8.09	2.70	3.00	8.61	2.72	3.17	9.42	2.75	3.43	10.87	2.80	3.88	11.85	2.84	4.17
34	4.38	2.69	1.63	5.24	2.72	1.93	6.58	2.77	2.38	7.87	2.82	2.79	8.40	2.84	2.96	9.20	2.87	3.21	10.66	2.92	3.65	11.63	2.95	3.94
35	4.26	2.75	1.55	5.13	2.78	1.85	6.47	2.83	2.29	7.76	2.88	2.69	<b>8.25</b>	<b>2.89</b>	<b>2.85</b>	9.09	2.92	3.11	10.54	2.98	3.54	<b>11.43</b>	<b>3.00</b>	<b>3.81</b>
36	4.14	2.81	1.47	5.01	2.84	1.76	6.35	2.89	2.20	7.64	2.93	2.61	8.16	2.95	2.77	8.97	2.98	3.01	10.42	3.03	3.44	11.39	3.07	3.71
38	3.89	2.92	1.33	4.76	2.95	1.61	6.10	3.00	2.03	7.39	3.05	2.42	7.91	3.07	2.58	8.72	3.10	2.81	10.17	3.15	3.23	11.14	3.19	3.49
40	3.62	3.03	1.19	4.49	3.07	1.46	5.83	3.12	1.87	7.12	3.16	2.25	7.64	3.18	2.40	8.45	3.21	2.63	9.90	3.26	3.04	10.87	3.30	3.29
42				4.20	3.17	1.32	5.54	3.22	1.72	6.83	3.27	2.09	7.35	3.29	2.23	8.16	3.32	2.46	9.61	3.37	2.85			
44				3.89	3.27	1.19	5.23	3.32	1.58	6.52	3.37	1.93	7.05	3.39	2.08	7.85	3.41	2.30						
46							4.90	3.41	1.44	6.20	3.46	1.79	6.72	3.48	1.93	7.52	3.50	2.15						

HEATING MODE

COOLING MODE

DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.7. ANK 030 H (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	7.64	4.05	1.89	8.50	4.08	2.08	9.83	4.12	2.39	11.10	4.16	2.67	11.62	4.18	2.78	12.42	4.20	2.96	13.86	4.25	3.26	14.83	4.28	3.46
-8	7.47	3.66	2.04	8.33	3.69	2.26	9.66	3.73	2.59	10.94	3.78	2.89	11.45	3.79	3.02	12.25	3.82	3.21	13.69	3.87	3.54	14.66	3.90	3.76
-6	7.32	3.32	2.20	8.17	3.35	2.44	9.50	3.39	2.80	10.78	3.44	3.13	11.29	3.45	3.27	12.09	3.48	3.47	13.53	3.53	3.83	14.50	3.56	4.07
-4	7.17	3.02	2.37	8.02	3.05	2.63	9.35	3.10	3.02	10.62	3.14	3.38	11.14	3.15	3.54	11.94	3.18	3.75	13.38	3.23	4.14	14.34	3.26	4.40
-2	7.02	2.76	2.54	7.88	2.79	2.82	9.20	2.84	3.24	10.48	2.88	3.64	11.00	2.90	3.79	11.80	2.92	4.04	13.24	2.97	4.46	14.20	3.01	4.72
0	6.89	2.54	2.71	7.74	2.57	3.01	9.07	2.62	3.46	10.34	2.66	3.89	10.86	2.68	4.05	11.66	2.70	4.32	13.10	2.75	4.76	14.06	2.79	5.04
2	6.75	2.36	2.86	7.61	2.39	3.18	8.93	2.43	3.67	10.21	2.48	4.12	10.73	2.49	4.31	11.52	2.52	4.57	12.96	2.57	5.04	13.93	2.60	5.36
4	6.62	2.21	3.00	7.48	2.24	3.34	8.81	2.28	3.86	10.08	2.33	4.33	10.60	2.34	4.53	11.39	2.37	4.81	12.83	2.42	5.30	13.80	2.45	5.63
6	6.50	2.09	3.11	7.35	2.12	3.47	8.68	2.17	4.00	9.95	2.21	4.50	10.47	2.23	4.70	11.27	2.25	5.01	12.71	2.30	5.53	13.67	2.34	5.84
8	6.37	2.00	3.19	7.23	2.03	3.56	8.55	2.08	4.11	9.83	2.12	4.64	10.34	2.14	4.83	11.14	2.17	5.13	12.58	2.22	5.67	13.54	2.25	6.02
10	6.25	1.94	3.22	7.10	1.97	3.60	8.43	2.02	4.17	9.70	2.06	4.71	10.22	2.08	4.91	11.02	2.11	5.22	12.46	2.16	5.77	13.42	2.19	6.13
12	6.12	1.90	3.22	6.98	1.93	3.62	8.30	1.98	4.19	9.58	2.03	4.72	10.09	2.04	4.95	10.89	2.07	5.26	12.33	2.12	5.82	13.29	2.16	6.15
14	5.99	1.89	3.17	6.85	1.92	3.57	8.17	1.97	4.15	9.45	2.01	4.70	9.96	2.03	4.91	10.76	2.06	5.22	12.20	2.11	5.78	13.16	2.14	6.15
16	5.86	1.90	3.08	6.72	1.93	3.48	8.04	1.98	4.06	9.32	2.02	4.61	9.83	2.04	4.82	10.63	2.07	5.14	12.07	2.12	5.69	13.03	2.16	6.03
18	5.73	1.93	2.97	6.58	1.96	3.36	7.91	2.01	3.94	9.18	2.05	4.48	9.70	2.07	4.69	10.49	2.10	5.00	11.93	2.15	5.55	12.89	2.19	5.89
20	5.58	1.98	2.82	6.44	2.01	3.20	7.76	2.06	3.77	9.04	2.10	4.30	9.55	2.12	4.50	10.35	2.15	4.81	11.79	2.20	5.36	12.75	2.23	5.72
22	5.43	2.04	2.66	6.29	2.07	3.04	7.61	2.12	3.59	8.89	2.16	4.12	9.40	2.18	4.31	10.20	2.21	4.62	11.64	2.26	5.15	12.60	2.30	5.48
24	5.28	2.12	2.49	6.13	2.15	2.85	7.46	2.20	3.39	8.73	2.24	3.90	9.25	2.26	4.09	10.04	2.29	4.38	11.48	2.34	4.91	12.44	2.37	5.25
26	5.11	2.20	2.32	5.97	2.24	2.67	7.29	2.28	3.20	8.56	2.33	3.67	9.08	2.35	3.86	9.87	2.37	4.16	11.31	2.43	4.65	12.27	2.46	4.99
28	4.93	2.30	2.14	5.79	2.33	2.48	7.11	2.38	2.99	8.39	2.43	3.45	8.90	2.44	3.65	9.70	2.47	3.93	11.13	2.52	4.42	12.09	2.56	4.72
30	4.74	2.40	1.98	5.60	2.44	2.30	6.92	2.48	2.79	8.20	2.53	3.24	8.71	2.55	3.42	9.51	2.58	3.69	10.94	2.63	4.16	11.90	2.66	4.47
32	4.54	2.51	1.81	5.40	2.55	2.12	6.72	2.59	2.59	7.99	2.64	3.03	8.51	2.66	3.20	9.31	2.68	3.47	10.74	2.74	3.92	11.70	2.77	4.22
34	4.32	2.63	1.64	5.18	2.66	1.95	6.50	2.71	2.40	7.78	2.75	2.83	8.29	2.77	2.99	9.09	2.80	3.25	10.53	2.85	3.69	11.49	2.88	3.99
35	4.21	2.68	1.57	5.07	2.71	1.87	6.39	2.76	2.32	7.67	2.81	2.73	<b>8.15</b>	<b>2.82</b>	<b>2.89</b>	8.98	2.85	3.15	10.41	2.90	3.59	<b>11.30</b>	<b>2.95</b>	<b>3.82</b>
36	4.09	2.74	1.49	4.95	2.77	1.79	6.27	2.82	2.22	7.55	2.86	2.64	8.06	2.88	2.80	8.86	2.91	3.04	10.30	2.96	3.48	11.25	3.00	3.75
38	3.84	2.85	1.35	4.70	2.88	1.63	6.03	2.93	2.06	7.30	2.98	2.45	7.81	2.99	2.61	8.61	3.02	2.85	10.05	3.07	3.27	11.01	3.11	3.54
40	3.58	2.96	1.21	4.43	2.99	1.48	5.76	3.04	1.89	7.03	3.08	2.28	7.55	3.10	2.44	8.35	3.13	2.67	9.78	3.18	3.08	10.74	3.22	3.34
42				4.15	3.10	1.34	5.48	3.14	1.75	6.75	3.19	2.12	7.27	3.21	2.26	8.06	3.24	2.49	9.50	3.29	2.89			
44				3.85	3.19	1.21	5.17	3.24	1.60	6.45	3.29	1.96	6.96	3.30	2.11	7.76	3.33	2.33						
46							4.85	3.33	1.46	6.12	3.37	1.82	6.64	3.39	1.96	7.43	3.42	2.17						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2)/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.8. ANK 030 HP | HA (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	7.74	4.15	1.87	8.60	4.18	2.06	9.95	4.22	2.36	11.24	4.26	2.64	11.76	4.28	2.75	12.57	4.31	2.92	14.04	4.36	3.22	15.01	4.39	3.42
-8	7.57	3.75	2.02	8.43	3.78	2.23	9.78	3.83	2.55	11.07	3.87	2.86	11.59	3.89	2.98	12.40	3.91	3.17	13.86	3.96	3.50	14.84	4.00	3.71
-6	7.41	3.40	2.18	8.27	3.43	2.41	9.61	3.48	2.76	10.91	3.52	3.10	11.43	3.54	3.23	12.24	3.57	3.43	13.70	3.61	3.80	14.68	3.65	4.02
-4	7.25	3.10	2.34	8.12	3.13	2.59	9.46	3.17	2.98	10.75	3.22	3.34	11.28	3.23	3.49	12.09	3.26	3.71	13.55	3.31	4.09	14.52	3.34	4.35
-2	7.11	2.83	2.51	7.98	2.86	2.79	9.32	2.91	3.20	10.61	2.95	3.60	11.13	2.97	3.75	11.94	3.00	3.98	13.40	3.05	4.39	14.37	3.08	4.67
0	6.97	2.61	2.67	7.84	2.64	2.97	9.18	2.68	3.43	10.47	2.73	3.84	10.99	2.74	4.01	11.80	2.77	4.26	13.26	2.82	4.70	14.23	2.86	4.98
2	6.84	2.42	2.83	7.70	2.45	3.14	9.04	2.49	3.63	10.34	2.54	4.07	10.86	2.56	4.24	11.67	2.58	4.52	13.12	2.63	4.99	14.10	2.67	5.28
4	6.71	2.26	2.97	7.57	2.29	3.31	8.91	2.34	3.81	10.20	2.38	4.29	10.73	2.40	4.47	11.53	2.43	4.74	12.99	2.48	5.24	13.97	2.52	5.54
6	6.58	2.14	3.07	7.44	2.17	3.43	8.79	2.22	3.96	10.08	2.26	4.46	10.60	2.28	4.65	11.41	2.31	4.94	12.86	2.36	5.45	13.84	2.40	5.77
8	6.45	2.05	3.15	7.32	2.08	3.52	8.66	2.13	4.07	9.95	2.17	4.59	10.47	2.19	4.78	11.28	2.22	5.08	12.74	2.27	5.61	13.71	2.31	5.94
10	6.33	1.99	3.18	7.19	2.02	3.56	8.53	2.07	4.12	9.82	2.11	4.65	10.34	2.13	4.85	11.15	2.16	5.16	12.61	2.21	5.71	13.58	2.24	6.06
12	6.20	1.95	3.18	7.06	1.98	3.57	8.40	2.03	4.14	9.69	2.08	4.66	10.22	2.09	4.89	11.02	2.12	5.20	12.48	2.17	5.75	13.45	2.21	6.09
14	6.07	1.94	3.13	6.93	1.97	3.52	8.27	2.02	4.09	9.56	2.06	4.64	10.09	2.08	4.85	10.89	2.11	5.16	12.35	2.16	5.72	13.32	2.20	6.05
16	5.93	1.95	3.04	6.80	1.98	3.43	8.14	2.03	4.01	9.43	2.07	4.56	9.95	2.09	4.76	10.76	2.12	5.08	12.21	2.17	5.63	13.19	2.21	5.97
18	5.80	1.98	2.93	6.66	2.01	3.31	8.00	2.06	3.88	9.29	2.11	4.40	9.81	2.12	4.63	10.62	2.15	4.94	12.08	2.20	5.49	13.05	2.24	5.83
20	5.65	2.03	2.78	6.52	2.06	3.17	7.86	2.11	3.73	9.15	2.15	4.26	9.67	2.17	4.46	10.48	2.20	4.76	11.93	2.25	5.30	12.90	2.29	5.63
22	5.50	2.09	2.63	6.37	2.12	3.00	7.71	2.17	3.55	9.00	2.22	4.05	9.52	2.24	4.25	10.32	2.27	4.55	11.78	2.32	5.08	12.75	2.35	5.43
24	5.34	2.17	2.46	6.21	2.20	2.82	7.55	2.25	3.36	8.84	2.30	3.84	9.36	2.32	4.03	10.17	2.34	4.35	11.62	2.40	4.84	12.59	2.43	5.18
26	5.17	2.26	2.29	6.04	2.29	2.64	7.38	2.34	3.15	8.67	2.39	3.63	9.19	2.40	3.83	10.00	2.43	4.12	11.45	2.49	4.60	12.42	2.52	4.93
28	4.99	2.36	2.11	5.86	2.39	2.45	7.20	2.44	2.95	8.49	2.49	3.41	9.01	2.50	3.60	9.82	2.53	3.88	11.27	2.59	4.35	12.24	2.62	4.67
30	4.80	2.46	1.95	5.67	2.50	2.27	7.01	2.55	2.75	8.30	2.59	3.20	8.82	2.61	3.38	9.62	2.64	3.64	11.08	2.69	4.12	12.05	2.73	4.41
32	4.60	2.58	1.78	5.46	2.61	2.09	6.80	2.66	2.56	8.09	2.70	3.00	8.61	2.72	3.17	9.42	2.75	3.43	10.87	2.80	3.88	11.85	2.84	4.17
34	4.38	2.69	1.63	5.24	2.72	1.93	6.58	2.77	2.38	7.87	2.82	2.79	8.40	2.84	2.96	9.20	2.87	3.21	10.66	2.92	3.65	11.63	2.95	3.94
35	4.26	2.75	1.55	5.13	2.78	1.85	6.47	2.83	2.29	7.76	2.88	2.69	8.25	2.89	2.85	9.09	2.92	3.11	10.54	2.98	3.54	11.43	3.00	3.81
36	4.14	2.81	1.47	5.01	2.84	1.76	6.35	2.89	2.20	7.64	2.93	2.61	8.16	2.95	2.77	8.97	2.98	3.01	10.42	3.03	3.44	11.39	3.07	3.71
38	3.89	2.92	1.33	4.76	2.95	1.61	6.10	3.00	2.03	7.39	3.05	2.42	7.91	3.07	2.58	8.72	3.10	2.81	10.17	3.15	3.23	11.14	3.19	3.49
40	3.62	3.03	1.19	4.49	3.07	1.46	5.83	3.12	1.87	7.12	3.16	2.25	7.64	3.18	2.40	8.45	3.21	2.63	9.90	3.26	3.04	10.87	3.30	3.29
42				4.20	3.17	1.32	5.54	3.22	1.72	6.83	3.27	2.09	7.35	3.29	2.23	8.16	3.32	2.46	9.61	3.37	2.85			
44				3.89	3.27	1.19	5.23	3.32	1.58	6.52	3.37	1.93	7.05	3.39	2.08	7.85	3.41	2.30						
46							4.90	3.41	1.44	6.20	3.46	1.79	6.72	3.48	1.93	7.52	3.50	2.15						

HEATING MODE

COOLING MODE

DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.9. ANK 040 H (230V/1/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	8.96	4.65	1.93	9.96	4.68	2.13	11.51	4.73	2.43	13.01	4.78	2.72	13.62	4.80	2.84	14.55	4.83	3.01	16.25	4.88	3.33	17.38	4.92	3.53
-8	8.76	4.21	2.08	9.76	4.24	2.30	11.32	4.29	2.64	12.81	4.34	2.95	13.42	4.36	3.08	14.36	4.39	3.27	16.05	4.44	3.61	17.18	4.48	3.83
-6	8.57	3.82	2.24	9.58	3.85	2.49	11.13	3.90	2.85	12.63	3.95	3.20	13.23	3.97	3.33	14.17	4.00	3.54	15.86	4.05	3.92	16.99	4.09	4.15
-4	8.40	3.47	2.42	9.40	3.51	2.68	10.95	3.56	3.08	12.45	3.61	3.45	13.05	3.62	3.60	13.99	3.66	3.82	15.68	3.71	4.23	16.81	3.75	4.48
-2	8.23	3.18	2.59	9.23	3.21	2.88	10.79	3.26	3.31	12.28	3.31	3.71	12.89	3.33	3.87	13.82	3.36	4.11	15.51	3.42	4.54	16.64	3.45	4.82
0	8.07	2.92	2.76	9.07	2.96	3.06	10.62	3.01	3.53	12.12	3.06	3.96	12.72	3.08	4.13	13.66	3.11	4.39	15.35	3.16	4.86	16.48	3.20	5.15
2	7.91	2.71	2.92	8.92	2.74	3.26	10.47	2.80	3.74	11.96	2.85	4.20	12.57	2.87	4.38	13.50	2.90	4.66	15.19	2.95	5.15	16.32	2.99	5.46
4	7.76	2.54	3.06	8.77	2.57	3.41	10.32	2.62	3.94	11.81	2.67	4.42	12.42	2.69	4.62	13.35	2.72	4.91	15.04	2.78	5.41	16.17	2.82	5.73
6	7.61	2.40	3.17	8.62	2.43	3.55	10.17	2.49	4.08	11.66	2.54	4.59	12.27	2.56	4.79	13.20	2.59	5.10	14.89	2.65	5.62	16.02	2.69	5.96
8	7.47	2.30	3.25	8.47	2.33	3.64	10.02	2.39	4.19	11.52	2.44	4.72	12.12	2.46	4.93	13.06	2.49	5.24	14.74	2.55	5.78	15.87	2.58	6.15
10	7.32	2.23	3.28	8.32	2.26	3.68	9.88	2.32	4.26	11.37	2.37	4.80	11.97	2.39	5.01	12.91	2.42	5.33	14.59	2.48	5.88	15.72	2.52	6.24
12	7.17	2.19	3.27	8.18	2.22	3.68	9.73	2.28	4.27	11.22	2.33	4.82	11.83	2.35	5.03	12.76	2.38	5.36	14.45	2.44	5.92	15.57	2.48	6.28
14	7.02	2.17	3.24	8.03	2.21	3.63	9.58	2.26	4.24	11.07	2.31	4.79	11.68	2.33	5.01	12.61	2.37	5.32	14.29	2.42	5.90	15.42	2.46	6.27
16	6.87	2.19	3.14	7.87	2.22	3.55	9.42	2.27	4.15	10.92	2.33	4.69	11.52	2.35	4.90	12.45	2.38	5.23	14.14	2.44	5.80	15.26	2.48	6.15
18	6.71	2.22	3.02	7.71	2.25	3.43	9.26	2.31	4.01	10.76	2.36	4.56	11.36	2.38	4.77	12.29	2.41	5.10	13.98	2.47	5.66	15.10	2.51	6.02
20	6.54	2.27	2.88	7.55	2.31	3.27	9.10	2.36	3.86	10.59	2.41	4.39	11.19	2.44	4.59	12.13	2.47	4.91	13.81	2.53	5.46	14.94	2.57	5.81
22	6.37	2.34	2.72	7.37	2.38	3.10	8.92	2.44	3.66	10.41	2.49	4.18	11.02	2.51	4.39	11.95	2.54	4.70	13.64	2.60	5.25	14.76	2.64	5.59
24	6.18	2.43	2.54	7.19	2.47	2.91	8.74	2.52	3.47	10.23	2.57	3.98	10.83	2.60	4.17	11.77	2.63	4.48	13.45	2.69	5.00	14.57	2.73	5.34
26	5.99	2.53	2.37	6.99	2.57	2.72	8.54	2.62	3.26	10.03	2.68	3.74	10.64	2.70	3.94	11.57	2.73	4.24	13.26	2.79	4.75	14.38	2.83	5.08
28	5.78	2.64	2.19	6.78	2.68	2.53	8.33	2.73	3.05	9.83	2.79	3.52	10.43	2.81	3.71	11.36	2.84	4.00	13.05	2.90	4.50	14.17	2.94	4.82
30	5.56	2.76	2.01	6.56	2.80	2.34	8.11	2.85	2.85	9.60	2.91	3.30	10.21	2.93	3.48	11.14	2.96	3.76	12.83	3.02	4.25	13.95	3.06	4.56
32	5.32	2.89	1.84	6.32	2.92	2.16	7.88	2.98	2.64	9.37	3.03	3.09	9.97	3.05	3.27	10.90	3.08	3.54	12.59	3.14	4.01	13.71	3.18	4.31
34	5.07	3.02	1.68	6.07	3.05	1.99	7.62	3.11	2.45	9.11	3.16	2.88	9.72	3.18	3.06	10.65	3.21	3.32	12.33	3.27	3.77	13.46	3.31	4.07
35	4.93	3.08	1.60	5.94	3.12	1.90	7.49	3.17	2.36	8.98	3.23	2.78	9.55	3.24	2.95	10.52	3.28	3.21	12.20	3.34	3.65	13.23	3.40	3.89
36	4.80	3.15	1.52	5.80	3.18	1.82	7.35	3.24	2.27	8.84	3.29	2.69	9.45	3.31	2.85	10.38	3.34	3.11	12.06	3.40	3.55	13.19	3.44	3.83
38	4.51	3.28	1.38	5.51	3.31	1.66	7.06	3.37	2.09	8.55	3.42	2.50	9.16	3.44	2.66	10.09	3.47	2.91	11.77	3.53	3.33	12.90	3.57	3.61
40	4.19	3.40	1.23	5.20	3.44	1.51	6.75	3.49	1.93	8.24	3.54	2.33	8.85	3.57	2.48	9.78	3.60	2.72	11.46	3.66	3.13	12.59	3.70	3.40
42				4.86	3.56	1.37	6.42	3.61	1.78	7.91	3.66	2.16	8.51	3.68	2.31	9.45	3.72	2.54	11.13	3.78	2.94			
44				4.51	3.67	1.23	6.06	3.72	1.63	7.55	3.77	2.00	8.16	3.80	2.15	9.09	3.83	2.37						
46							5.68	3.82	1.49	7.17	3.88	1.85	7.78	3.90	1.99	8.71	3.93	2.22						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2)/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95



## 11.10. ANK 040 HP | HA (230V/1/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	9.07	4.74	1.91	10.08	4.77	2.11	11.66	4.82	2.42	13.18	4.87	2.71	13.79	4.89	2.82	14.74	4.92	3.00	16.45	4.97	3.31	17.59	5.01	3.51
-8	8.87	4.29	2.07	9.88	4.32	2.29	11.46	4.37	2.62	12.97	4.42	2.93	13.59	4.44	3.06	14.54	4.47	3.25	16.25	4.52	3.60	17.39	4.56	3.81
-6	8.68	3.89	2.23	9.70	3.92	2.47	11.27	3.97	2.84	12.79	4.02	3.18	13.40	4.04	3.32	14.35	4.07	3.53	16.06	4.13	3.89	17.20	4.17	4.12
-4	8.50	3.54	2.40	9.52	3.57	2.67	11.09	3.62	3.06	12.61	3.67	3.44	13.22	3.69	3.58	14.17	3.72	3.81	15.88	3.78	4.20	17.02	3.82	4.46
-2	8.33	3.23	2.58	9.35	3.27	2.86	10.92	3.32	3.29	12.44	3.37	3.69	13.05	3.39	3.85	14.00	3.42	4.09	15.71	3.48	4.51	16.85	3.52	4.79
0	8.17	2.98	2.74	9.18	3.01	3.05	10.76	3.06	3.52	12.27	3.11	3.95	12.88	3.13	4.12	13.83	3.16	4.38	15.54	3.22	4.83	16.68	3.26	5.12
2	8.01	2.76	2.90	9.03	2.79	3.24	10.60	2.85	3.72	12.11	2.90	4.18	12.73	2.92	4.36	13.67	2.95	4.63	15.38	3.01	5.11	16.52	3.05	5.42
4	7.86	2.58	3.05	8.88	2.62	3.39	10.45	2.67	3.91	11.96	2.72	4.40	12.57	2.74	4.59	13.52	2.77	4.88	15.23	2.83	5.38	16.37	2.87	5.70
6	7.71	2.44	3.16	8.73	2.48	3.52	10.30	2.53	4.07	11.81	2.58	4.58	12.42	2.61	4.76	13.37	2.64	5.06	15.08	2.70	5.59	16.22	2.74	5.92
8	7.56	2.34	3.23	8.58	2.38	3.61	10.15	2.43	4.18	11.66	2.48	4.70	12.27	2.50	4.91	13.22	2.53	5.23	14.93	2.59	5.76	16.07	2.63	6.11
10	7.41	2.27	3.26	8.43	2.30	3.67	10.00	2.36	4.24	11.51	2.41	4.78	12.12	2.43	4.99	13.07	2.46	5.31	14.78	2.52	5.87	15.92	2.56	6.22
12	7.26	2.23	3.26	8.28	2.26	3.66	9.85	2.32	4.25	11.36	2.37	4.79	11.97	2.39	5.01	12.92	2.42	5.34	14.63	2.48	5.90	15.77	2.52	6.26
14	7.11	2.21	3.22	8.13	2.25	3.61	9.70	2.30	4.22	11.21	2.36	4.75	11.82	2.38	4.97	12.77	2.41	5.30	14.47	2.47	5.86	15.61	2.51	6.22
16	6.96	2.23	3.12	7.97	2.26	3.53	9.54	2.32	4.11	11.05	2.37	4.66	11.67	2.39	4.88	12.61	2.42	5.21	14.32	2.48	5.77	15.46	2.52	6.13
18	6.79	2.26	3.00	7.81	2.30	3.40	9.38	2.35	3.99	10.89	2.40	4.54	11.50	2.43	4.73	12.45	2.46	5.06	14.15	2.52	5.62	15.29	2.56	5.97
20	6.63	2.32	2.86	7.64	2.35	3.25	9.21	2.41	3.82	10.72	2.46	4.36	11.33	2.48	4.57	12.28	2.51	4.89	13.99	2.57	5.44	15.12	2.61	5.79
22	6.45	2.39	2.70	7.46	2.42	3.08	9.03	2.48	3.64	10.55	2.53	4.17	11.16	2.55	4.38	12.10	2.59	4.67	13.81	2.65	5.21	14.95	2.69	5.56
24	6.26	2.48	2.52	7.28	2.51	2.90	8.85	2.57	3.44	10.36	2.62	3.95	10.97	2.64	4.16	11.91	2.68	4.44	13.62	2.74	4.97	14.76	2.78	5.31
26	6.06	2.58	2.35	7.08	2.62	2.70	8.65	2.67	3.24	10.16	2.72	3.74	10.77	2.75	3.92	11.72	2.78	4.22	13.42	2.84	4.73	14.56	2.88	5.06
28	5.85	2.69	2.17	6.87	2.73	2.52	8.44	2.79	3.03	9.95	2.84	3.50	10.56	2.86	3.69	11.51	2.89	3.98	13.21	2.95	4.48	14.35	2.99	4.80
30	5.63	2.81	2.00	6.64	2.85	2.33	8.21	2.91	2.82	9.73	2.96	3.29	10.34	2.98	3.47	11.28	3.01	3.75	12.99	3.07	4.23	14.12	3.11	4.54
32	5.39	2.94	1.83	6.40	2.98	2.15	7.97	3.03	2.63	9.49	3.09	3.07	10.10	3.11	3.25	11.04	3.14	3.52	12.75	3.20	3.98	13.88	3.24	4.28
34	5.13	3.07	1.67	6.15	3.11	1.98	7.72	3.17	2.44	9.23	3.22	2.87	9.84	3.24	3.04	10.79	3.27	3.30	12.49	3.33	3.75	13.63	3.37	4.04
35	5.00	3.14	1.59	6.01	3.18	1.89	7.58	3.23	2.35	9.09	3.28	2.77	<b>9.67</b>	<b>3.30</b>	<b>2.93</b>	10.65	3.34	3.19	12.35	3.40	3.63	<b>13.38</b>	<b>3.43</b>	<b>3.90</b>
36	4.86	3.21	1.51	5.87	3.24	1.81	7.44	3.30	2.25	8.95	3.35	2.67	9.57	3.37	2.84	10.51	3.41	3.08	12.22	3.47	3.52	13.35	3.51	3.80
38	4.56	3.34	1.37	5.58	3.37	1.66	7.15	3.43	2.08	8.66	3.48	2.49	9.27	3.50	2.65	10.22	3.54	2.89	11.92	3.60	3.31	13.06	3.64	3.59
40	4.25	3.46	1.23	5.26	3.50	1.50	6.83	3.56	1.92	8.35	3.61	2.31	8.96	3.63	2.47	9.90	3.66	2.70	11.61	3.72	3.12	12.74	3.76	3.39
42				4.92	3.62	1.36	6.50	3.68	1.77	8.01	3.73	2.15	8.62	3.75	2.30	9.56	3.79	2.52	11.27	3.85	2.93			
44				4.56	3.74	1.22	6.14	3.79	1.62	7.65	3.84	1.99	8.26	3.87	2.13	9.20	3.90	2.36						
46							5.75	3.89	1.48	7.26	3.95	1.84	7.87	3.97	1.98	8.82	4.00	2.21						

HEATING MODE

COOLING MODE

DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.11. ANK 040 H (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	9.83	5.10	1.93	10.93	5.13	2.13	12.64	5.19	2.44	14.28	5.24	2.73	14.94	5.26	2.84	15.97	5.29	3.02	17.83	5.35	3.33	19.07	5.39	3.54
-8	9.61	4.61	2.08	10.71	4.65	2.30	12.42	4.70	2.64	14.06	4.75	2.96	14.73	4.77	3.09	15.75	4.81	3.27	17.61	4.87	3.62	18.85	4.91	3.84
-6	9.41	4.18	2.25	10.51	4.22	2.49	12.21	4.27	2.86	13.86	4.33	3.20	14.52	4.35	3.34	15.55	4.38	3.55	17.40	4.44	3.92	18.64	4.48	4.16
-4	9.21	3.81	2.42	10.31	3.84	2.68	12.02	3.90	3.08	13.66	3.95	3.46	14.33	3.97	3.61	15.35	4.00	3.84	17.21	4.07	4.23	18.45	4.11	4.49
-2	9.03	3.48	2.59	10.13	3.52	2.88	11.84	3.57	3.32	13.48	3.63	3.71	14.14	3.65	3.87	15.17	3.68	4.12	17.02	3.74	4.55	18.26	3.78	4.83
0	8.85	3.20	2.77	9.95	3.24	3.07	11.66	3.30	3.53	13.30	3.35	3.97	13.96	3.37	4.14	14.99	3.40	4.41	16.84	3.47	4.85	18.08	3.51	5.15
2	8.68	2.97	2.92	9.78	3.01	3.25	11.49	3.06	3.75	13.13	3.12	4.21	13.79	3.14	4.39	14.82	3.17	4.68	16.67	3.24	5.15	17.91	3.28	5.46
4	8.52	2.78	3.06	9.62	2.82	3.41	11.32	2.87	3.94	12.96	2.93	4.42	13.63	2.95	4.62	14.65	2.99	4.90	16.50	3.05	5.41	17.74	3.09	5.74
6	8.36	2.63	3.18	9.46	2.67	3.54	11.16	2.73	4.09	12.80	2.78	4.60	13.46	2.80	4.81	14.49	2.84	5.10	16.34	2.90	5.63	17.58	2.94	5.98
8	8.20	2.52	3.25	9.30	2.56	3.63	11.00	2.61	4.21	12.64	2.67	4.73	13.30	2.69	4.94	14.33	2.73	5.25	16.18	2.79	5.80	17.41	2.83	6.15
10	8.04	2.44	3.30	9.13	2.48	3.68	10.84	2.54	4.27	12.48	2.59	4.82	13.14	2.62	5.02	14.17	2.65	5.35	16.02	2.71	5.91	17.25	2.76	6.25
12	7.87	2.40	3.28	8.97	2.43	3.69	10.68	2.49	4.29	12.31	2.55	4.83	12.98	2.57	5.05	14.00	2.61	5.36	15.85	2.67	5.94	17.09	2.71	6.31
14	7.71	2.38	3.24	8.81	2.42	3.64	10.51	2.48	4.24	12.15	2.54	4.78	12.81	2.56	5.00	13.84	2.59	5.34	15.69	2.66	5.90	16.92	2.70	6.27
16	7.54	2.39	3.15	8.64	2.43	3.56	10.34	2.49	4.15	11.98	2.55	4.70	12.64	2.57	4.92	13.67	2.61	5.24	15.52	2.67	5.81	16.75	2.71	6.18
18	7.36	2.43	3.03	8.46	2.47	3.43	10.17	2.53	4.02	11.80	2.59	4.56	12.47	2.61	4.78	13.49	2.64	5.11	15.34	2.71	5.66	16.57	2.75	6.03
20	7.18	2.49	2.88	8.28	2.53	3.27	9.98	2.59	3.85	11.62	2.65	4.38	12.28	2.67	4.60	13.31	2.70	4.93	15.16	2.77	5.47	16.39	2.81	5.83
22	6.99	2.57	2.72	8.09	2.61	3.10	9.79	2.67	3.67	11.43	2.73	4.19	12.09	2.75	4.40	13.12	2.78	4.72	14.96	2.85	5.25	16.20	2.89	5.61
24	6.79	2.66	2.55	7.89	2.70	2.92	9.59	2.76	3.47	11.23	2.82	3.98	11.89	2.84	4.19	12.91	2.88	4.48	14.76	2.94	5.02	15.99	2.99	5.35
26	6.57	2.77	2.37	7.67	2.81	2.73	9.37	2.87	3.26	11.01	2.93	3.76	11.67	2.95	3.96	12.70	2.99	4.25	14.55	3.05	4.77	15.78	3.10	5.09
28	6.34	2.90	2.19	7.44	2.94	2.53	9.15	3.00	3.05	10.78	3.05	3.53	11.45	3.08	3.72	12.47	3.11	4.01	14.32	3.18	4.50	15.55	3.22	4.83
30	6.10	3.03	2.01	7.20	3.07	2.35	8.90	3.13	2.84	10.54	3.18	3.31	11.20	3.21	3.49	12.23	3.24	3.77	14.07	3.31	4.25	15.31	3.35	4.57
32	5.84	3.16	1.85	6.94	3.20	2.17	8.64	3.26	2.65	10.28	3.32	3.10	10.94	3.34	3.28	11.97	3.38	3.54	13.81	3.44	4.01	15.05	3.49	4.31
34	5.56	3.31	1.68	6.66	3.35	1.99	8.36	3.41	2.45	10.00	3.46	2.89	10.67	3.49	3.06	11.69	3.52	3.32	13.54	3.59	3.77	14.77	3.63	4.07
35	5.41	3.38	1.60	6.51	3.42	1.90	8.22	3.48	2.36	9.86	3.53	2.79	<b>10.48</b>	<b>3.55</b>	<b>2.95</b>	11.54	3.59	3.21	13.39	3.66	3.66	<b>14.52</b>	<b>3.73</b>	<b>3.89</b>
36	5.26	3.45	1.52	6.36	3.49	1.82	8.07	3.55	2.27	9.71	3.60	2.70	10.37	3.63	2.86	11.39	3.66	3.11	13.24	3.73	3.55	14.47	3.77	3.84
38	4.94	3.59	1.38	6.04	3.63	1.66	7.75	3.69	2.10	9.39	3.75	2.50	10.05	3.77	2.67	11.07	3.80	2.91	12.92	3.87	3.34	14.15	3.91	3.62
40	4.60	3.73	1.23	5.70	3.77	1.51	7.41	3.83	1.93	9.05	3.88	2.33	9.71	3.91	2.48	10.73	3.94	2.72	12.58	4.01	3.14	13.81	4.05	3.41
42				5.34	3.90	1.37	7.04	3.96	1.78	8.68	4.01	2.16	9.34	4.04	2.31	10.37	4.07	2.55	12.21	4.14	2.95			
44				4.94	4.02	1.23	6.65	4.08	1.63	8.29	4.14	2.00	8.95	4.16	2.15	9.97	4.19	2.38						
46							6.23	4.19	1.49	7.87	4.25	1.85	8.53	4.27	2.00	9.56	4.30	2.22						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.12. ANK 040 HP | HA (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	9.95	5.18	1.92	11.06	5.22	2.12	12.79	5.27	2.43	14.46	5.33	2.71	15.13	5.35	2.83	16.17	5.38	3.01	18.05	5.44	3.32	19.30	5.48	3.52
-8	9.73	4.69	2.07	10.85	4.73	2.29	12.57	4.78	2.63	14.24	4.83	2.95	14.91	4.86	3.07	15.95	4.89	3.26	17.83	4.95	3.60	19.08	4.99	3.82
-6	9.52	4.25	2.24	10.64	4.29	2.48	12.37	4.35	2.84	14.03	4.40	3.19	14.70	4.42	3.33	15.74	4.45	3.54	17.62	4.51	3.91	18.87	4.56	4.14
-4	9.33	3.87	2.41	10.44	3.91	2.67	12.17	3.96	3.07	13.83	4.02	3.44	14.50	4.04	3.59	15.54	4.07	3.82	17.42	4.13	4.22	18.67	4.18	4.47
-2	9.14	3.54	2.58	10.26	3.58	2.87	11.98	3.63	3.30	13.64	3.69	3.70	14.32	3.71	3.86	15.36	3.74	4.11	17.23	3.81	4.52	18.49	3.85	4.80
0	8.96	3.26	2.75	10.08	3.29	3.06	11.80	3.35	3.52	13.46	3.41	3.95	14.14	3.43	4.12	15.18	3.46	4.39	17.05	3.52	4.84	18.30	3.57	5.13
2	8.79	3.02	2.91	9.91	3.06	3.24	11.63	3.12	3.73	13.29	3.17	4.19	13.96	3.19	4.38	15.00	3.23	4.64	16.88	3.29	5.13	18.13	3.33	5.44
4	8.62	2.83	3.05	9.74	2.86	3.41	11.46	2.92	3.92	13.12	2.98	4.40	13.80	3.00	4.60	14.83	3.04	4.88	16.71	3.10	5.39	17.96	3.14	5.72
6	8.46	2.67	3.17	9.57	2.71	3.53	11.30	2.77	4.08	12.96	2.83	4.58	13.63	2.85	4.78	14.67	2.88	5.09	16.54	2.95	5.61	17.79	2.99	5.95
8	8.30	2.56	3.24	9.41	2.60	3.62	11.14	2.66	4.19	12.80	2.71	4.72	13.47	2.74	4.92	14.50	2.77	5.23	16.38	2.84	5.77	17.63	2.88	6.12
10	8.13	2.48	3.28	9.25	2.52	3.67	10.97	2.58	4.25	12.63	2.64	4.78	13.30	2.66	5.00	14.34	2.69	5.33	16.21	2.76	5.87	17.47	2.80	6.24
12	7.97	2.44	3.27	9.08	2.48	3.66	10.81	2.54	4.26	12.47	2.59	4.81	13.14	2.62	5.02	14.18	2.65	5.35	16.05	2.72	5.90	17.30	2.76	6.27
14	7.80	2.42	3.22	8.92	2.46	3.63	10.64	2.52	4.22	12.30	2.58	4.77	12.97	2.60	4.99	14.01	2.64	5.31	15.88	2.70	5.88	17.13	2.75	6.23
16	7.63	2.43	3.14	8.75	2.47	3.54	10.47	2.53	4.14	12.13	2.59	4.68	12.80	2.61	4.90	13.84	2.65	5.22	15.71	2.72	5.78	16.96	2.76	6.14
18	7.45	2.47	3.02	8.57	2.51	3.41	10.29	2.57	4.00	11.95	2.63	4.54	12.62	2.65	4.76	13.66	2.69	5.08	15.53	2.75	5.65	16.78	2.80	5.99
20	7.27	2.53	2.87	8.38	2.57	3.26	10.11	2.63	3.84	11.77	2.69	4.38	12.44	2.71	4.59	13.47	2.75	4.90	15.34	2.82	5.44	16.59	2.86	5.80
22	7.08	2.61	2.71	8.19	2.65	3.09	9.91	2.71	3.66	11.57	2.77	4.18	12.24	2.79	4.39	13.28	2.83	4.69	15.15	2.90	5.22	16.40	2.94	5.58
24	6.87	2.71	2.54	7.98	2.75	2.90	9.71	2.81	3.46	11.37	2.87	3.96	12.04	2.89	4.17	13.07	2.93	4.46	14.94	2.99	5.00	16.19	3.04	5.33
26	6.65	2.82	2.36	7.77	2.86	2.72	9.49	2.92	3.25	11.15	2.98	3.74	11.82	3.00	3.94	12.86	3.04	4.23	14.73	3.11	4.74	15.97	3.15	5.07
28	6.42	2.95	2.18	7.53	2.99	2.52	9.26	3.05	3.04	10.92	3.10	3.52	11.59	3.13	3.70	12.62	3.16	3.99	14.50	3.23	4.49	15.74	3.27	4.81
30	6.18	3.08	2.01	7.29	3.12	2.34	9.01	3.18	2.83	10.67	3.24	3.29	11.34	3.26	3.48	12.38	3.30	3.75	14.25	3.36	4.24	15.50	3.41	4.55
32	5.91	3.22	1.84	7.03	3.26	2.16	8.75	3.32	2.64	10.41	3.38	3.08	11.08	3.40	3.26	12.12	3.44	3.52	13.99	3.50	4.00	15.23	3.55	4.29
34	5.63	3.36	1.68	6.74	3.40	1.98	8.47	3.46	2.45	10.13	3.52	2.88	10.80	3.54	3.05	11.83	3.58	3.30	13.70	3.65	3.75	14.95	3.69	4.05
35	5.48	3.43	1.60	6.60	3.47	1.90	8.32	3.54	2.35	9.98	3.59	2.78	<b>10.61</b>	<b>3.61</b>	<b>2.94</b>	11.69	3.65	3.20	13.56	3.72	3.65	<b>14.80</b>	<b>3.76</b>	<b>3.94</b>
36	5.33	3.51	1.52	6.44	3.55	1.81	8.17	3.61	2.26	9.83	3.67	2.68	10.50	3.69	2.85	11.53	3.73	3.09	13.40	3.79	3.54	14.65	3.84	3.82
38	5.01	3.65	1.37	6.12	3.69	1.66	7.84	3.75	2.09	9.50	3.81	2.49	10.17	3.83	2.66	11.21	3.87	2.90	13.08	3.93	3.33	14.33	3.98	3.60
40	4.66	3.79	1.23	5.77	3.83	1.51	7.50	3.89	1.93	9.16	3.95	2.32	9.83	3.97	2.48	10.86	4.01	2.71	12.73	4.07	3.13	13.98	4.12	3.39
42				5.40	3.96	1.36	7.13	4.02	1.77	8.79	4.08	2.15	9.46	4.11	2.30	10.49	4.14	2.53	12.36	4.21	2.94			
44				5.01	4.09	1.22	6.73	4.15	1.62	8.39	4.21	1.99	9.06	4.23	2.14	10.10	4.26	2.37						
46							6.31	4.26	1.48	7.97	4.32	1.84	8.64	4.34	1.99	9.67	4.38	2.21						

HEATING MODE

COOLING MODE

DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.13. ANK 045 H (230V/1/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	10.96	5.35	2.05	12.19	5.39	2.26	14.09	5.45	2.59	15.93	5.50	2.90	16.67	5.52	3.02	17.82	5.56	3.21	19.89	5.62	3.54	21.27	5.66	3.76
-8	10.72	4.84	2.21	11.95	4.88	2.45	13.85	4.94	2.80	15.68	4.99	3.14	16.43	5.02	3.27	17.57	5.05	3.48	19.64	5.11	3.84	21.02	5.16	4.07
-6	10.49	4.39	2.39	11.72	4.43	2.65	13.62	4.49	3.03	15.46	4.54	3.41	16.20	4.57	3.54	17.34	4.60	3.77	19.41	4.67	4.16	20.79	4.71	4.41
-4	10.28	4.00	2.57	11.51	4.04	2.85	13.41	4.10	3.27	15.24	4.15	3.67	15.98	4.17	3.83	17.13	4.21	4.07	19.19	4.27	4.49	20.58	4.32	4.76
-2	10.07	3.66	2.75	11.30	3.69	3.06	13.20	3.75	3.52	15.03	3.81	3.94	15.77	3.83	4.12	16.92	3.87	4.37	18.99	3.93	4.83	20.37	3.98	5.12
0	9.88	3.36	2.94	11.10	3.40	3.26	13.00	3.46	3.76	14.84	3.52	4.22	15.58	3.54	4.40	16.72	3.58	4.67	18.79	3.64	5.16	20.17	3.69	5.47
2	9.69	3.12	3.11	10.91	3.16	3.45	12.81	3.22	3.98	14.64	3.28	4.46	15.39	3.30	4.66	16.53	3.33	4.96	18.60	3.40	5.47	19.98	3.44	5.81
4	9.50	2.92	3.25	10.73	2.96	3.63	12.63	3.02	4.18	14.46	3.08	4.69	15.20	3.10	4.90	16.34	3.14	5.20	18.41	3.20	5.75	19.79	3.25	6.09
6	9.32	2.76	3.38	10.55	2.80	3.77	12.45	2.86	4.35	14.28	2.92	4.89	15.02	2.94	5.11	16.16	2.98	5.42	18.23	3.05	5.98	19.61	3.09	6.35
8	9.14	2.65	3.45	10.37	2.69	3.86	12.27	2.75	4.46	14.10	2.80	5.04	14.84	2.83	5.24	15.98	2.86	5.59	18.05	2.93	6.16	19.42	2.98	6.52
10	8.96	2.56	3.50	10.19	2.60	3.92	12.09	2.67	4.53	13.92	2.72	5.12	14.66	2.75	5.33	15.80	2.78	5.68	17.87	2.85	6.27	19.24	2.90	6.63
12	8.78	2.52	3.48	10.01	2.56	3.91	11.91	2.62	4.55	13.74	2.68	5.13	14.48	2.70	5.36	15.62	2.74	5.70	17.68	2.81	6.29	19.06	2.85	6.69
14	8.60	2.50	3.44	9.82	2.54	3.87	11.72	2.61	4.49	13.55	2.66	5.09	14.29	2.69	5.31	15.43	2.72	5.67	17.50	2.79	6.27	18.88	2.84	6.65
16	8.41	2.52	3.34	9.64	2.56	3.77	11.54	2.62	4.40	13.36	2.68	4.99	14.10	2.70	5.22	15.25	2.74	5.57	17.31	2.81	6.16	18.68	2.85	6.55
18	8.21	2.55	3.22	9.44	2.60	3.63	11.34	2.66	4.26	13.17	2.72	4.84	13.91	2.74	5.08	15.05	2.78	5.41	17.11	2.85	6.00	18.49	2.89	6.40
20	8.01	2.62	3.06	9.24	2.66	3.47	11.14	2.72	4.10	12.96	2.78	4.66	13.70	2.80	4.89	14.84	2.84	5.23	16.91	2.91	5.81	18.28	2.95	6.20
22	7.80	2.70	2.89	9.02	2.74	3.29	10.92	2.80	3.90	12.75	2.86	4.46	13.49	2.89	4.67	14.63	2.92	5.01	16.69	2.99	5.58	18.07	3.04	5.94
24	7.57	2.80	2.70	8.80	2.84	3.10	10.70	2.90	3.69	12.52	2.96	4.23	13.26	2.99	4.43	14.40	3.03	4.75	16.47	3.09	5.33	17.84	3.14	5.68
26	7.33	2.92	2.51	8.56	2.96	2.89	10.46	3.02	3.46	12.28	3.08	3.99	13.02	3.10	4.20	14.16	3.14	4.51	16.23	3.21	5.06	17.60	3.25	5.42
28	7.08	3.04	2.33	8.30	3.08	2.69	10.20	3.15	3.24	12.03	3.21	3.75	12.77	3.23	3.95	13.91	3.27	4.25	15.97	3.34	4.78	17.35	3.38	5.13
30	6.80	3.18	2.14	8.03	3.22	2.49	9.93	3.29	3.02	11.76	3.35	3.51	12.50	3.37	3.71	13.64	3.41	4.00	15.70	3.47	4.52	17.07	3.52	4.85
32	6.51	3.32	1.96	7.74	3.37	2.30	9.64	3.43	2.81	11.47	3.49	3.29	12.21	3.51	3.48	13.35	3.55	3.76	15.41	3.62	4.26	16.78	3.66	4.58
34	6.20	3.47	1.79	7.43	3.51	2.12	9.33	3.58	2.61	11.16	3.64	3.07	11.90	3.66	3.25	13.04	3.70	3.52	15.10	3.77	4.01	16.47	3.81	4.32
35	6.04	3.55	1.70	7.27	3.59	2.03	9.17	3.65	2.51	10.99	3.71	2.96	<b>11.69</b>	<b>3.73</b>	<b>3.13</b>	12.88	3.77	3.42	14.94	3.84	3.89	<b>16.30</b>	<b>3.93</b>	<b>4.15</b>
36	5.87	3.62	1.62	7.10	3.66	1.94	9.00	3.73	2.41	10.83	3.79	2.86	11.56	3.81	3.03	12.71	3.85	3.30	14.77	3.92	3.77	16.14	3.96	4.08
38	5.51	3.77	1.46	6.74	3.81	1.77	8.64	3.88	2.23	10.47	3.94	2.66	11.21	3.96	2.83	12.35	4.00	3.09	14.41	4.07	3.54	15.79	4.11	3.84
40	5.13	3.92	1.31	6.36	3.96	1.61	8.26	4.02	2.05	10.09	4.08	2.47	10.83	4.10	2.64	11.97	4.14	2.89	14.03	4.21	3.33	15.41	4.25	3.63
42				5.95	4.10	1.45	7.85	4.16	1.89	9.68	4.22	2.29	10.42	4.24	2.46	11.56	4.28	2.70	13.62	4.35	3.13			
44				5.52	4.22	1.31	7.42	4.29	1.73	9.25	4.35	2.13	9.98	4.37	2.28	11.13	4.41	2.52						
46							6.95	4.40	1.58	8.78	4.46	1.97	9.52	4.49	2.12	10.66	4.52	2.36						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.14. ANK 045 HP | HA (230V/1/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	11.11	5.57	1.99	12.36	5.61	2.20	14.29	5.67	2.52	16.15	5.72	2.82	16.90	5.75	2.94	18.06	5.78	3.12	20.16	5.85	3.45	21.56	5.89	3.66
-8	10.87	5.04	2.16	12.11	5.08	2.38	14.04	5.14	2.73	15.90	5.20	3.06	16.65	5.22	3.19	17.81	5.25	3.39	19.91	5.32	3.74	21.31	5.36	3.98
-6	10.64	4.57	2.33	11.88	4.61	2.58	13.81	4.67	2.96	15.67	4.73	3.31	16.42	4.75	3.46	17.58	4.79	3.67	19.68	4.85	4.06	21.08	4.90	4.30
-4	10.42	4.16	2.50	11.66	4.20	2.78	13.59	4.26	3.19	15.45	4.32	3.58	16.20	4.34	3.73	17.36	4.38	3.96	19.46	4.44	4.38	20.86	4.49	4.65
-2	10.21	3.80	2.69	11.46	3.84	2.98	13.38	3.90	3.43	15.24	3.96	3.85	15.99	3.99	4.01	17.15	4.02	4.27	19.25	4.09	4.71	20.65	4.14	4.99
0	10.01	3.50	2.86	11.26	3.54	3.18	13.18	3.60	3.66	15.04	3.66	4.11	15.79	3.68	4.29	16.95	3.72	4.56	19.05	3.79	5.03	20.44	3.83	5.34
2	9.82	3.25	3.02	11.06	3.29	3.36	12.99	3.35	3.88	14.85	3.41	4.35	15.60	3.43	4.55	16.76	3.47	4.83	18.85	3.54	5.32	20.25	3.58	5.66
4	9.63	3.04	3.17	10.88	3.08	3.53	12.80	3.14	4.08	14.66	3.20	4.58	15.41	3.23	4.77	16.57	3.26	5.08	18.66	3.33	5.60	20.06	3.38	5.93
6	9.45	2.87	3.29	10.69	2.92	3.66	12.62	2.98	4.23	14.47	3.04	4.76	15.22	3.06	4.97	16.38	3.10	5.28	18.48	3.17	5.83	19.87	3.22	6.17
8	9.27	2.75	3.37	10.51	2.79	3.77	12.44	2.86	4.35	14.29	2.92	4.89	15.04	2.94	5.12	16.20	2.98	5.44	18.29	3.05	6.00	19.69	3.10	6.35
10	9.09	2.67	3.40	10.33	2.71	3.81	12.25	2.77	4.42	14.11	2.83	4.99	14.86	2.86	5.20	16.02	2.90	5.52	18.11	2.97	6.10	19.51	3.01	6.48
12	8.90	2.62	3.40	10.15	2.66	3.82	12.07	2.73	4.42	13.92	2.79	4.99	14.67	2.81	5.22	15.83	2.85	5.55	17.93	2.92	6.14	19.32	2.97	6.51
14	8.72	2.60	3.35	9.96	2.65	3.76	11.88	2.71	4.38	13.74	2.77	4.96	14.49	2.80	5.18	15.65	2.83	5.53	17.74	2.90	6.12	19.13	2.95	6.48
16	8.52	2.62	3.25	9.77	2.66	3.67	11.69	2.72	4.30	13.55	2.79	4.86	14.30	2.81	5.09	15.45	2.85	5.42	17.54	2.92	6.01	18.94	2.97	6.38
18	8.33	2.66	3.13	9.57	2.70	3.54	11.49	2.76	4.16	13.35	2.83	4.72	14.10	2.85	4.95	15.25	2.89	5.28	17.35	2.96	5.86	18.74	3.01	6.23
20	8.12	2.72	2.99	9.36	2.76	3.39	11.29	2.83	3.99	13.14	2.89	4.55	13.89	2.92	4.76	15.05	2.96	5.08	17.14	3.03	5.66	18.53	3.07	6.04
22	7.90	2.81	2.81	9.15	2.85	3.21	11.07	2.92	3.79	12.92	2.98	4.34	13.67	3.00	4.56	14.83	3.04	4.88	16.92	3.11	5.44	18.31	3.16	5.79
24	7.67	2.91	2.64	8.92	2.96	3.01	10.84	3.02	3.59	12.69	3.08	4.12	13.44	3.11	4.32	14.60	3.15	4.63	16.69	3.22	5.18	18.09	3.27	5.53
26	7.43	3.03	2.45	8.67	3.08	2.81	10.60	3.14	3.38	12.45	3.20	3.89	13.20	3.23	4.09	14.36	3.27	4.39	16.45	3.34	4.93	17.84	3.39	5.26
28	7.17	3.17	2.26	8.42	3.21	2.62	10.34	3.27	3.16	12.19	3.34	3.65	12.94	3.36	3.85	14.10	3.40	4.15	16.19	3.47	4.67	17.58	3.52	4.99
30	6.90	3.31	2.08	8.14	3.35	2.43	10.07	3.42	2.94	11.92	3.48	3.43	12.67	3.50	3.62	13.82	3.54	3.90	15.91	3.61	4.41	17.31	3.66	4.73
32	6.60	3.46	1.91	7.85	3.50	2.24	9.77	3.57	2.74	11.62	3.63	3.20	12.37	3.66	3.38	13.53	3.69	3.67	15.62	3.76	4.15	17.01	3.81	4.46
34	6.29	3.61	1.74	7.53	3.66	2.06	9.46	3.72	2.54	11.31	3.78	2.99	12.06	3.81	3.17	13.22	3.85	3.43	15.31	3.92	3.91	16.70	3.97	4.21
35	6.12	3.69	1.66	7.37	3.73	1.98	9.29	3.80	2.44	11.14	3.86	2.89	11.85	3.88	3.06	13.05	3.93	3.32	15.14	4.00	3.79	16.54	4.08	4.05
36	5.95	3.77	1.58	7.20	3.81	1.89	9.12	3.88	2.35	10.97	3.94	2.78	11.72	3.97	2.95	12.88	4.00	3.22	14.97	4.07	3.68	16.36	4.12	3.97
38	5.59	3.92	1.43	6.83	3.97	1.72	8.76	4.03	2.17	10.61	4.09	2.59	11.36	4.12	2.76	12.52	4.16	3.01	14.61	4.23	3.45	16.00	4.28	3.74
40	5.20	4.07	1.28	6.45	4.12	1.57	8.37	4.18	2.00	10.23	4.24	2.41	10.98	4.27	2.57	12.13	4.31	2.81	14.22	4.38	3.25	15.62	4.43	3.53
42				6.03	4.26	1.42	7.96	4.33	1.84	9.81	4.39	2.23	10.56	4.41	2.39	11.72	4.45	2.63	13.81	4.52	3.06			
44				5.59	4.39	1.27	7.52	4.46	1.69	9.37	4.52	2.07	10.12	4.55	2.22	11.28	4.58	2.46						
46							7.04	4.58	1.54	8.90	4.64	1.92	9.65	4.67	2.07	10.81	4.70	2.30						

HEATING MODE

COOLING MODE

DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.15. ANK 045 H (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	10.85	5.71	1.90	12.07	5.75	2.10	13.95	5.81	2.40	15.76	5.87	2.68	16.50	5.89	2.80	17.63	5.93	2.97	19.68	6.00	3.28	21.05	6.04	3.49
-8	10.61	5.17	2.05	11.83	5.21	2.27	13.71	5.27	2.60	15.52	5.33	2.91	16.26	5.35	3.04	17.39	5.39	3.23	19.44	5.46	3.56	20.81	5.50	3.78
-6	10.39	4.69	2.22	11.60	4.73	2.45	13.48	4.79	2.81	15.30	4.85	3.15	16.03	4.87	3.29	17.17	4.91	3.50	19.21	4.98	3.86	20.58	5.02	4.10
-4	10.17	4.27	2.38	11.39	4.31	2.64	13.27	4.37	3.04	15.08	4.43	3.40	15.82	4.45	3.56	16.95	4.49	3.78	19.00	4.56	4.17	20.36	4.60	4.43
-2	9.97	3.90	2.56	11.18	3.94	2.84	13.07	4.01	3.26	14.88	4.06	3.67	15.61	4.09	3.82	16.75	4.13	4.06	18.79	4.20	4.47	20.16	4.24	4.75
0	9.78	3.59	2.72	10.99	3.63	3.03	12.87	3.69	3.49	14.68	3.75	3.91	15.42	3.78	4.08	16.55	3.82	4.33	18.60	3.89	4.78	19.96	3.93	5.08
2	9.59	3.33	2.88	10.80	3.37	3.20	12.68	3.43	3.70	14.49	3.50	4.14	15.23	3.52	4.33	16.36	3.56	4.60	18.41	3.63	5.07	19.77	3.67	5.39
4	9.40	3.12	3.01	10.62	3.16	3.36	12.50	3.22	3.88	14.31	3.28	4.36	15.04	3.31	4.54	16.18	3.35	4.83	18.22	3.42	5.33	19.59	3.46	5.66
6	9.23	2.95	3.13	10.44	2.99	3.49	12.32	3.06	4.03	14.13	3.12	4.53	14.86	3.14	4.73	16.00	3.18	5.03	18.04	3.25	5.55	19.40	3.30	5.88
8	9.05	2.82	3.21	10.26	2.87	3.57	12.14	2.93	4.14	13.95	2.99	4.67	14.69	3.02	4.86	15.82	3.06	5.17	17.86	3.13	5.71	19.22	3.18	6.04
10	8.87	2.74	3.24	10.08	2.78	3.63	11.97	2.85	4.20	13.77	2.91	4.73	14.51	2.93	4.95	15.64	2.97	5.27	17.68	3.04	5.82	19.05	3.09	6.17
12	8.69	2.69	3.23	9.91	2.73	3.63	11.79	2.80	4.21	13.60	2.86	4.76	14.33	2.88	4.98	15.46	2.92	5.29	17.50	2.99	5.85	18.87	3.04	6.21
14	8.51	2.67	3.19	9.72	2.71	3.59	11.60	2.78	4.17	13.41	2.84	4.72	14.14	2.87	4.93	15.28	2.91	5.25	17.32	2.98	5.81	18.68	3.03	6.17
16	8.32	2.68	3.10	9.54	2.73	3.49	11.42	2.79	4.09	13.23	2.86	4.63	13.96	2.88	4.85	15.09	2.92	5.17	17.13	2.99	5.73	18.49	3.04	6.08
18	8.13	2.73	2.98	9.34	2.77	3.37	11.22	2.84	3.95	13.03	2.90	4.49	13.76	2.92	4.71	14.89	2.96	5.03	16.94	3.04	5.57	18.30	3.09	5.92
20	7.93	2.79	2.84	9.14	2.84	3.22	11.02	2.90	3.80	12.83	2.97	4.32	13.56	2.99	4.54	14.69	3.03	4.85	16.73	3.10	5.40	18.10	3.15	5.75
22	7.72	2.88	2.68	8.93	2.92	3.06	10.81	2.99	3.62	12.62	3.06	4.12	13.35	3.08	4.33	14.48	3.12	4.64	16.52	3.19	5.18	17.88	3.24	5.52
24	7.49	2.99	2.51	8.71	3.03	2.87	10.59	3.10	3.42	12.39	3.16	3.92	13.13	3.19	4.12	14.26	3.23	4.41	16.30	3.30	4.94	17.66	3.35	5.27
26	7.25	3.11	2.33	8.47	3.16	2.68	10.35	3.22	3.21	12.16	3.29	3.70	12.89	3.31	3.89	14.02	3.35	4.19	16.06	3.42	4.70	17.42	3.47	5.02
28	7.00	3.25	2.15	8.22	3.29	2.50	10.10	3.36	3.01	11.91	3.42	3.48	12.64	3.45	3.66	13.77	3.49	3.95	15.81	3.56	4.44	17.17	3.61	4.76
30	6.73	3.39	1.99	7.95	3.44	2.31	9.83	3.51	2.80	11.64	3.57	3.26	12.37	3.60	3.44	13.50	3.64	3.71	15.54	3.71	4.19	16.90	3.76	4.49
32	6.45	3.55	1.82	7.66	3.59	2.13	9.54	3.66	2.61	11.35	3.72	3.05	12.08	3.75	3.22	13.21	3.79	3.49	15.25	3.86	3.95	16.61	3.91	4.25
34	6.14	3.71	1.65	7.35	3.75	1.96	9.23	3.82	2.42	11.04	3.88	2.85	11.77	3.91	3.01	12.90	3.95	3.27	14.94	4.02	3.72	16.30	4.07	4.00
35	5.98	3.79	1.58	7.19	3.83	1.88	9.07	3.90	2.33	10.88	3.96	2.75	<b>11.57</b>	<b>3.98</b>	<b>2.91</b>	12.74	4.03	3.16	14.78	4.10	3.60	<b>16.04</b>	<b>4.18</b>	<b>3.84</b>
36	5.81	3.87	1.50	7.03	3.91	1.80	8.91	3.98	2.24	10.71	4.04	2.65	11.45	4.07	2.81	12.58	4.11	3.06	14.62	4.18	3.50	15.98	4.23	3.78
38	5.46	4.02	1.36	6.67	4.07	1.64	8.55	4.14	2.07	10.36	4.20	2.47	11.09	4.23	2.62	12.22	4.27	2.86	14.26	4.34	3.29	15.62	4.39	3.56
40	5.08	4.18	1.22	6.30	4.22	1.49	8.18	4.29	1.91	9.99	4.35	2.30	10.72	4.38	2.45	11.85	4.42	2.68	13.89	4.49	3.09	15.25	4.54	3.36
42				5.89	4.37	1.35	7.77	4.44	1.75	9.58	4.50	2.13	10.31	4.53	2.28	11.44	4.57	2.50	13.48	4.64	2.91			
44				5.46	4.51	1.21	7.34	4.57	1.61	9.15	4.64	1.97	9.88	4.66	2.12	11.01	4.70	2.34						
46							6.88	4.70	1.46	8.69	4.76	1.83	9.42	4.79	1.97	10.55	4.83	2.18						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2)/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.16. ANK 045 HP | HA (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	11.01	5.91	1.86	12.24	5.96	2.05	14.15	6.02	2.35	16.00	6.08	2.63	16.74	6.10	2.74	17.89	6.14	2.91	19.97	6.21	3.22	21.36	6.26	3.41
-8	10.77	5.35	2.01	12.00	5.39	2.23	13.91	5.46	2.55	15.75	5.52	2.85	16.50	5.54	2.98	17.65	5.58	3.16	19.73	5.65	3.49	21.11	5.70	3.70
-6	10.54	4.85	2.17	11.77	4.90	2.40	13.68	4.96	2.76	15.52	5.02	3.09	16.27	5.04	3.23	17.42	5.08	3.43	19.50	5.15	3.79	20.88	5.20	4.02
-4	10.32	4.42	2.33	11.56	4.46	2.59	13.47	4.52	2.98	15.30	4.58	3.34	16.05	4.61	3.48	17.20	4.65	3.70	19.28	4.72	4.08	20.66	4.77	4.33
-2	10.12	4.04	2.50	11.35	4.08	2.78	13.26	4.15	3.20	15.10	4.21	3.59	15.84	4.23	3.74	16.99	4.27	3.98	19.07	4.34	4.39	20.45	4.39	4.66
0	9.92	3.72	2.67	11.15	3.76	2.97	13.06	3.82	3.42	14.90	3.89	3.83	15.64	3.91	4.00	16.79	3.95	4.25	18.87	4.02	4.69	20.25	4.07	4.98
2	9.73	3.45	2.82	10.96	3.49	3.14	12.87	3.56	3.62	14.71	3.62	4.06	15.45	3.64	4.24	16.60	3.68	4.51	18.68	3.76	4.97	20.06	3.80	5.28
4	9.54	3.23	2.95	10.77	3.27	3.29	12.68	3.34	3.80	14.52	3.40	4.27	15.26	3.42	4.46	16.41	3.46	4.74	18.49	3.54	5.22	19.87	3.59	5.53
6	9.36	3.05	3.07	10.59	3.10	3.42	12.50	3.16	3.96	14.34	3.23	4.44	15.08	3.25	4.64	16.23	3.29	4.93	18.30	3.37	5.43	19.69	3.41	5.77
8	9.18	2.92	3.14	10.41	2.97	3.51	12.32	3.03	4.07	14.16	3.10	4.57	14.90	3.12	4.78	16.05	3.16	5.08	18.12	3.24	5.59	19.51	3.29	5.93
10	9.00	2.83	3.18	10.23	2.88	3.55	12.14	2.95	4.12	13.98	3.01	4.64	14.72	3.04	4.84	15.87	3.08	5.15	17.94	3.15	5.70	19.33	3.20	6.04
12	8.82	2.78	3.17	10.05	2.83	3.55	11.96	2.89	4.14	13.80	2.96	4.66	14.54	2.98	4.88	15.69	3.03	5.18	17.76	3.10	5.73	19.14	3.15	6.08
14	8.63	2.76	3.13	9.87	2.81	3.51	11.77	2.88	4.09	13.61	2.94	4.63	14.35	2.97	4.83	15.50	3.01	5.15	17.57	3.08	5.70	18.96	3.13	6.06
16	8.45	2.78	3.04	9.68	2.82	3.43	11.58	2.89	4.01	13.42	2.96	4.53	14.16	2.98	4.75	15.31	3.02	5.07	17.38	3.10	5.61	18.76	3.15	5.96
18	8.25	2.82	2.93	9.48	2.87	3.30	11.39	2.94	3.87	13.22	3.00	4.41	13.97	3.03	4.61	15.11	3.07	4.92	17.18	3.14	5.47	18.57	3.19	5.82
20	8.04	2.89	2.78	9.28	2.94	3.16	11.18	3.01	3.71	13.02	3.07	4.24	13.76	3.10	4.44	14.91	3.14	4.75	16.98	3.21	5.29	18.36	3.26	5.63
22	7.83	2.98	2.63	9.06	3.03	2.99	10.97	3.10	3.54	12.80	3.16	4.05	13.55	3.19	4.25	14.69	3.23	4.55	16.76	3.30	5.08	18.14	3.36	5.40
24	7.60	3.09	2.46	8.83	3.14	2.81	10.74	3.21	3.35	12.58	3.27	3.85	13.32	3.30	4.04	14.47	3.34	4.33	16.54	3.42	4.84	17.92	3.47	5.16
26	7.36	3.22	2.29	8.59	3.27	2.63	10.50	3.34	3.14	12.34	3.40	3.63	13.08	3.43	3.81	14.22	3.47	4.10	16.29	3.54	4.60	17.68	3.60	4.91
28	7.11	3.36	2.12	8.34	3.41	2.45	10.24	3.48	2.94	12.08	3.54	3.41	12.82	3.57	3.59	13.97	3.61	3.87	16.04	3.69	4.35	17.42	3.74	4.66
30	6.83	3.51	1.95	8.06	3.56	2.26	9.97	3.63	2.75	11.81	3.70	3.19	12.55	3.72	3.37	13.70	3.76	3.64	15.77	3.84	4.11	17.15	3.89	4.41
32	6.54	3.67	1.78	7.77	3.72	2.09	9.68	3.79	2.55	11.52	3.85	2.99	12.26	3.88	3.16	13.41	3.92	3.42	15.47	4.00	3.87	16.86	4.05	4.16
34	6.23	3.84	1.62	7.46	3.88	1.92	9.37	3.95	2.37	11.21	4.02	2.79	11.95	4.05	2.95	13.09	4.09	3.20	15.16	4.16	3.64	16.54	4.21	3.93
35	6.07	3.92	1.55	7.30	3.97	1.84	9.21	4.04	2.28	11.04	4.10	2.69	<b>11.74</b>	<b>4.12</b>	<b>2.85</b>	12.93	4.17	3.10	15.00	4.24	3.54	<b>16.25</b>	<b>4.27</b>	<b>3.81</b>
36	5.90	4.00	1.48	7.13	4.05	1.76	9.04	4.12	2.19	10.87	4.18	2.60	11.61	4.21	2.76	12.76	4.25	3.00	14.83	4.33	3.42	16.21	4.38	3.70
38	5.54	4.17	1.33	6.77	4.21	1.61	8.68	4.28	2.03	10.51	4.35	2.42	11.26	4.37	2.58	12.40	4.42	2.81	14.47	4.49	3.22	15.85	4.54	3.49
40	5.16	4.33	1.19	6.39	4.37	1.46	8.30	4.44	1.87	10.13	4.51	2.25	10.87	4.53	2.40	12.02	4.57	2.63	14.09	4.65	3.03	15.47	4.70	3.29
42				5.98	4.52	1.32	7.89	4.59	1.72	9.72	4.66	2.09	10.47	4.69	2.23	11.61	4.73	2.45	13.68	4.80	2.85			
44				5.54	4.67	1.19	7.45	4.73	1.58	9.28	4.80	1.93	10.03	4.83	2.08	11.17	4.87	2.29						
46							6.98	4.86	1.44	8.82	4.93	1.79	9.56	4.95	1.93	10.71	5.00	2.14						

HEATING MODE

COOLING MODE

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.17. ANK 050 H (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	12.23	6.23	1.96	13.60	6.27	2.17	15.72	6.34	2.48	17.77	6.40	2.78	18.59	6.43	2.89	19.87	6.47	3.07	22.18	6.54	3.39	23.73	6.59	3.60
-8	11.96	5.64	2.12	13.33	5.68	2.35	15.45	5.75	2.69	17.50	5.81	3.01	18.32	5.84	3.14	19.60	5.88	3.33	21.91	5.95	3.68	23.45	6.00	3.91
-6	11.71	5.11	2.29	13.08	5.16	2.53	15.20	5.22	2.91	17.24	5.29	3.26	18.07	5.31	3.40	19.35	5.35	3.62	21.65	5.43	3.99	23.20	5.48	4.23
-4	11.47	4.65	2.47	12.83	4.70	2.73	14.96	4.76	3.14	17.00	4.83	3.52	17.83	4.86	3.67	19.10	4.90	3.90	21.41	4.97	4.31	22.95	5.02	4.57
-2	11.24	4.25	2.64	12.61	4.30	2.93	14.73	4.37	3.37	16.77	4.43	3.79	17.60	4.46	3.95	18.87	4.50	4.19	21.18	4.57	4.63	22.72	4.63	4.91
0	11.02	3.91	2.82	12.39	3.96	3.13	14.51	4.03	3.60	16.55	4.09	4.05	17.37	4.12	4.22	18.65	4.16	4.48	20.96	4.24	4.94	22.50	4.29	5.24
2	10.81	3.63	2.98	12.17	3.68	3.31	14.29	3.75	3.81	16.34	3.81	4.29	17.16	3.84	4.47	18.44	3.88	4.75	20.74	3.96	5.24	22.28	4.01	5.56
4	10.60	3.40	3.12	11.97	3.44	3.48	14.09	3.51	4.01	16.13	3.58	4.51	16.95	3.61	4.70	18.23	3.65	4.99	20.54	3.73	5.51	22.07	3.78	5.84
6	10.40	3.21	3.24	11.77	3.26	3.61	13.89	3.33	4.17	15.93	3.40	4.69	16.75	3.43	4.88	18.03	3.47	5.20	20.33	3.54	5.74	21.87	3.60	6.08
8	10.20	3.08	3.31	11.57	3.12	3.71	13.69	3.20	4.28	15.73	3.26	4.83	16.55	3.29	5.03	17.83	3.33	5.35	20.13	3.41	5.90	21.67	3.46	6.26
10	10.00	2.98	3.36	11.37	3.03	3.75	13.49	3.10	4.35	15.53	3.17	4.90	16.35	3.20	5.11	17.63	3.24	5.44	19.93	3.32	6.00	21.47	3.37	6.37
12	9.80	2.93	3.34	11.16	2.98	3.74	13.28	3.05	4.35	15.32	3.12	4.91	16.15	3.14	5.14	17.42	3.19	5.46	19.73	3.26	6.05	21.26	3.32	6.40
14	9.59	2.91	3.30	10.96	2.96	3.70	13.08	3.03	4.32	15.12	3.10	4.88	15.94	3.13	5.09	17.22	3.17	5.43	19.52	3.25	6.01	21.05	3.30	6.38
16	9.38	2.93	3.20	10.75	2.97	3.62	12.87	3.05	4.22	14.91	3.12	4.78	15.73	3.14	5.01	17.01	3.19	5.33	19.31	3.26	5.92	20.84	3.32	6.28
18	9.16	2.97	3.08	10.53	3.02	3.49	12.65	3.09	4.09	14.69	3.16	4.65	15.51	3.19	4.86	16.79	3.23	5.20	19.09	3.31	5.77	20.62	3.36	6.14
20	8.93	3.04	2.94	10.30	3.09	3.33	12.42	3.17	3.92	14.46	3.23	4.48	15.28	3.26	4.69	16.56	3.31	5.00	18.86	3.38	5.58	20.39	3.44	5.93
22	8.70	3.14	2.77	10.06	3.19	3.15	12.18	3.26	3.74	14.22	3.33	4.27	15.04	3.36	4.48	16.32	3.40	4.80	18.62	3.48	5.35	20.15	3.53	5.71
24	8.44	3.26	2.59	9.81	3.31	2.96	11.93	3.38	3.53	13.97	3.45	4.05	14.79	3.48	4.25	16.07	3.52	4.57	18.37	3.60	5.10	19.90	3.65	5.45
26	8.18	3.39	2.41	9.54	3.44	2.77	11.66	3.51	3.32	13.70	3.58	3.83	14.53	3.61	4.02	15.80	3.65	4.33	18.10	3.73	4.85	19.63	3.79	5.18
28	7.89	3.54	2.23	9.26	3.59	2.58	11.38	3.66	3.11	13.42	3.73	3.60	14.24	3.76	3.79	15.52	3.80	4.08	17.81	3.88	4.59	19.35	3.94	4.91
30	7.59	3.70	2.05	8.96	3.75	2.39	11.08	3.82	2.90	13.12	3.89	3.37	13.94	3.92	3.56	15.21	3.96	3.84	17.51	4.04	4.33	19.05	4.10	4.65
32	7.27	3.87	1.88	8.63	3.92	2.20	10.75	3.99	2.69	12.79	4.06	3.15	13.62	4.09	3.33	14.89	4.13	3.61	17.19	4.21	4.08	18.72	4.26	4.39
34	6.92	4.04	1.71	8.29	4.09	2.03	10.41	4.16	2.50	12.45	4.23	2.94	13.27	4.26	3.12	14.54	4.30	3.38	16.84	4.38	3.84	18.38	4.44	4.14
35	6.74	4.13	1.63	8.11	4.18	1.94	10.23	4.25	2.41	12.26	4.32	2.84	<b>13.04</b>	<b>4.34</b>	<b>3.00</b>	14.36	4.39	3.27	16.66	4.47	3.73	<b>18.07</b>	<b>4.56</b>	<b>3.96</b>
36	6.55	4.22	1.55	7.92	4.26	1.86	10.04	4.34	2.31	12.08	4.41	2.74	12.90	4.44	2.91	14.17	4.48	3.16	16.47	4.56	3.61	18.01	4.61	3.91
38	6.15	4.39	1.40	7.52	4.44	1.69	9.64	4.51	2.14	11.68	4.58	2.55	12.50	4.61	2.71	13.78	4.65	2.96	16.08	4.73	3.40	17.61	4.78	3.68
40	5.73	4.56	1.26	7.10	4.61	1.54	9.22	4.68	1.97	11.25	4.75	2.37	12.08	4.78	2.53	13.35	4.82	2.77	15.65	4.90	3.19	17.18	4.95	3.47
42				6.64	4.77	1.39	8.76	4.84	1.81	10.80	4.91	2.20	11.62	4.94	2.35	12.90	4.98	2.59	15.20	5.06	3.00			
44				6.15	4.91	1.25	8.27	4.99	1.66	10.31	5.06	2.04	11.14	5.08	2.19	12.41	5.13	2.42						
46							7.75	5.12	1.51	9.79	5.19	1.89	10.62	5.22	2.03	11.89	5.26	2.26						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95



## 11.18. ANK 050 HP | HA (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	12.40	6.45	1.92	13.79	6.49	2.12	15.94	6.56	2.43	18.01	6.62	2.72	18.85	6.65	2.83	20.15	6.69	3.01	22.49	6.77	3.32	24.05	6.82	3.53
-8	12.12	5.83	2.08	13.51	5.88	2.30	15.67	5.95	2.63	17.74	6.01	2.95	18.58	6.04	3.08	19.87	6.08	3.27	22.21	6.16	3.61	23.78	6.21	3.83
-6	11.87	5.29	2.24	13.26	5.33	2.49	15.41	5.40	2.85	17.48	5.47	3.20	18.32	5.50	3.33	19.61	5.54	3.54	21.95	5.62	3.91	23.52	5.67	4.15
-4	11.62	4.81	2.42	13.01	4.86	2.68	15.16	4.93	3.08	17.23	5.00	3.45	18.07	5.02	3.60	19.37	5.07	3.82	21.71	5.14	4.22	23.27	5.19	4.48
-2	11.39	4.40	2.59	12.78	4.45	2.87	14.93	4.52	3.30	17.00	4.59	3.70	17.84	4.61	3.87	19.13	4.66	4.11	21.47	4.73	4.54	23.03	4.79	4.81
0	11.17	4.05	2.76	12.56	4.10	3.06	14.71	4.17	3.53	16.78	4.24	3.96	17.61	4.26	4.13	18.91	4.31	4.39	21.25	4.38	4.85	22.81	4.44	5.14
2	10.95	3.76	2.91	12.34	3.80	3.25	14.49	3.87	3.74	16.56	3.94	4.20	17.40	3.97	4.38	18.69	4.01	4.66	21.03	4.09	5.14	22.59	4.15	5.44
4	10.75	3.52	3.05	12.13	3.56	3.41	14.28	3.64	3.92	16.35	3.70	4.42	17.19	3.73	4.61	18.48	3.78	4.89	20.82	3.85	5.41	22.38	3.91	5.72
6	10.54	3.33	3.17	11.93	3.37	3.54	14.08	3.45	4.08	16.15	3.52	4.59	16.98	3.54	4.80	18.28	3.59	5.09	20.61	3.67	5.62	22.17	3.72	5.96
8	10.34	3.18	3.25	11.73	3.23	3.63	13.87	3.31	4.19	15.94	3.38	4.72	16.78	3.40	4.94	18.07	3.45	5.24	20.41	3.53	5.78	21.97	3.58	6.14
10	10.14	3.09	3.28	11.52	3.14	3.67	13.67	3.21	4.26	15.74	3.28	4.80	16.58	3.31	5.01	17.87	3.35	5.33	20.20	3.43	5.89	21.76	3.49	6.23
12	9.93	3.03	3.28	11.32	3.08	3.68	13.47	3.15	4.28	15.53	3.22	4.82	16.37	3.25	5.04	17.66	3.30	5.35	20.00	3.38	5.92	21.56	3.43	6.29
14	9.72	3.01	3.23	11.11	3.06	3.63	13.26	3.14	4.22	15.33	3.21	4.78	16.16	3.24	4.99	17.45	3.28	5.32	19.79	3.36	5.89	21.35	3.41	6.26
16	9.51	3.03	3.14	10.90	3.08	3.54	13.04	3.15	4.14	15.11	3.22	4.69	15.95	3.25	4.91	17.24	3.30	5.22	19.57	3.38	5.79	21.13	3.43	6.16
18	9.29	3.08	3.02	10.68	3.12	3.42	12.82	3.20	4.01	14.89	3.27	4.55	15.73	3.30	4.77	17.02	3.34	5.10	19.35	3.43	5.64	20.91	3.48	6.01
20	9.06	3.15	2.88	10.44	3.20	3.26	12.59	3.27	3.85	14.66	3.35	4.38	15.50	3.38	4.59	16.79	3.42	4.91	19.12	3.50	5.46	20.68	3.56	5.81
22	8.82	3.25	2.71	10.20	3.30	3.09	12.35	3.37	3.66	14.42	3.45	4.18	15.25	3.48	4.38	16.54	3.52	4.70	18.88	3.60	5.24	20.43	3.66	5.58
24	8.56	3.37	2.54	9.95	3.42	2.91	12.09	3.50	3.45	14.16	3.57	3.97	15.00	3.60	4.17	16.29	3.64	4.48	18.62	3.72	5.01	20.18	3.78	5.34
26	8.29	3.51	2.36	9.68	3.56	2.72	11.82	3.64	3.25	13.89	3.71	3.74	14.73	3.74	3.94	16.02	3.78	4.24	18.35	3.86	4.75	19.90	3.92	5.08
28	8.00	3.66	2.19	9.39	3.71	2.53	11.54	3.79	3.04	13.60	3.86	3.52	14.44	3.89	3.71	15.73	3.94	3.99	18.06	4.02	4.49	19.62	4.07	4.82
30	7.69	3.83	2.01	9.08	3.88	2.34	11.23	3.95	2.84	13.30	4.03	3.30	14.13	4.06	3.48	15.42	4.10	3.76	17.75	4.18	4.25	19.31	4.24	4.55
32	7.37	4.00	1.84	8.75	4.05	2.16	10.90	4.13	2.64	12.97	4.20	3.09	13.80	4.23	3.26	15.10	4.27	3.54	17.43	4.36	4.00	18.98	4.41	4.30
34	7.02	4.18	1.68	8.40	4.23	1.99	10.55	4.31	2.45	12.62	4.38	2.88	13.45	4.41	3.05	14.74	4.45	3.31	17.08	4.53	3.77	18.63	4.59	4.06
35	6.83	4.27	1.60	8.22	4.32	1.90	10.37	4.40	2.36	12.43	4.47	2.78	<b>13.22</b>	<b>4.49</b>	<b>2.94</b>	14.56	4.54	3.21	16.89	4.62	3.66	<b>18.30</b>	<b>4.66</b>	<b>3.93</b>
36	6.64	4.36	1.52	8.03	4.41	1.82	10.18	4.49	2.27	12.24	4.56	2.68	13.08	4.59	2.85	14.37	4.63	3.10	16.70	4.71	3.55	18.25	4.77	3.83
38	6.24	4.54	1.37	7.62	4.59	1.66	9.77	4.67	2.09	11.84	4.74	2.50	12.68	4.77	2.66	13.97	4.81	2.90	16.30	4.89	3.33	17.85	4.95	3.61
40	5.81	4.71	1.23	7.19	4.76	1.51	9.34	4.84	1.93	11.41	4.91	2.32	12.25	4.94	2.48	13.54	4.99	2.71	15.87	5.07	3.13	17.42	5.12	3.40
42				6.73	4.93	1.37	8.88	5.01	1.77	10.95	5.08	2.16	11.78	5.11	2.31	13.08	5.15	2.54	15.41	5.23	2.95			
44				6.24	5.08	1.23	8.39	5.16	1.63	10.46	5.23	2.00	11.29	5.26	2.15	12.58	5.30	2.37						
46							7.86	5.30	1.48	9.93	5.37	1.85	10.76	5.40	1.99	12.05	5.44	2.22						

HEATING MODE

COOLING MODE

DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.19. ANK 085 H (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	14.52	7.49	1.94	16.14	7.55	2.14	18.66	7.63	2.45	21.09	7.70	2.74	22.07	7.73	2.86	23.59	7.78	3.03	26.33	7.87	3.35	28.17	7.93	3.55
-8	14.20	6.78	2.09	15.82	6.83	2.32	18.34	6.91	2.65	20.77	6.99	2.97	21.75	7.02	3.10	23.27	7.07	3.29	26.01	7.16	3.63	27.84	7.22	3.86
-6	13.90	6.15	2.26	15.52	6.20	2.50	18.04	6.28	2.87	20.47	6.36	3.22	21.45	6.39	3.36	22.97	6.44	3.57	25.71	6.53	3.94	27.54	6.59	4.18
-4	13.61	5.60	2.43	15.24	5.65	2.70	17.75	5.73	3.10	20.18	5.81	3.47	21.16	5.84	3.62	22.68	5.89	3.85	25.42	5.98	4.25	27.25	6.04	4.51
-2	13.34	5.12	2.61	14.96	5.17	2.89	17.48	5.25	3.33	19.91	5.33	3.74	20.89	5.36	3.90	22.40	5.41	4.14	25.14	5.50	4.57	26.97	5.56	4.85
0	13.08	4.71	2.78	14.70	4.76	3.09	17.22	4.85	3.55	19.65	4.92	3.99	20.63	4.96	4.16	22.14	5.01	4.42	24.88	5.10	4.88	26.71	5.16	5.18
2	12.83	4.37	2.94	14.45	4.42	3.27	16.97	4.50	3.77	19.39	4.58	4.23	20.37	4.62	4.41	21.89	4.67	4.69	24.63	4.76	5.17	26.45	4.82	5.49
4	12.58	4.09	3.08	14.21	4.14	3.43	16.72	4.23	3.95	19.15	4.31	4.44	20.13	4.34	4.64	21.64	4.39	4.93	24.38	4.48	5.44	26.20	4.54	5.77
6	12.34	3.87	3.19	13.97	3.92	3.56	16.48	4.01	4.11	18.91	4.09	4.62	19.89	4.12	4.83	21.40	4.17	5.13	24.14	4.26	5.67	25.96	4.33	6.00
8	12.11	3.70	3.27	13.73	3.76	3.65	16.25	3.84	4.23	18.67	3.92	4.76	19.65	3.96	4.96	21.16	4.01	5.28	23.90	4.10	5.83	25.72	4.16	6.18
10	11.87	3.59	3.31	13.49	3.65	3.70	16.01	3.73	4.29	18.43	3.81	4.84	19.41	3.85	5.04	20.92	3.90	5.36	23.66	3.99	5.93	25.48	4.05	6.29
12	11.63	3.52	3.30	13.25	3.58	3.70	15.77	3.67	4.30	18.19	3.75	4.85	19.17	3.78	5.07	20.68	3.83	5.40	23.42	3.93	5.96	25.24	3.99	6.33
14	11.39	3.50	3.25	13.01	3.56	3.65	15.53	3.65	4.25	17.95	3.73	4.81	18.93	3.76	5.03	20.44	3.81	5.36	23.17	3.91	5.93	24.99	3.97	6.29
16	11.14	3.52	3.16	12.76	3.58	3.56	15.27	3.66	4.17	17.70	3.75	4.72	18.67	3.78	4.94	20.19	3.83	5.27	22.92	3.93	5.83	24.74	3.99	6.20
18	10.88	3.58	3.04	12.50	3.63	3.44	15.02	3.72	4.04	17.44	3.80	4.59	18.41	3.84	4.79	19.93	3.89	5.12	22.66	3.98	5.69	24.48	4.05	6.04
20	10.61	3.66	2.90	12.23	3.72	3.29	14.75	3.81	3.87	17.17	3.89	4.41	18.14	3.92	4.63	19.66	3.98	4.94	22.39	4.07	5.50	24.21	4.13	5.86
22	10.32	3.78	2.73	11.95	3.84	3.11	14.46	3.92	3.69	16.88	4.01	4.21	17.86	4.04	4.42	19.37	4.09	4.74	22.10	4.19	5.27	23.93	4.25	5.63
24	10.02	3.92	2.56	11.65	3.98	2.93	14.16	4.06	3.49	16.58	4.15	4.00	17.56	4.18	4.20	19.07	4.23	4.51	21.80	4.33	5.03	23.63	4.39	5.38
26	9.71	4.08	2.38	11.33	4.14	2.74	13.85	4.23	3.27	16.27	4.31	3.77	17.24	4.34	3.97	18.76	4.40	4.26	21.49	4.49	4.79	23.31	4.56	5.11
28	9.37	4.26	2.20	10.99	4.32	2.54	13.51	4.41	3.06	15.93	4.49	3.55	16.91	4.52	3.74	18.42	4.58	4.02	21.15	4.67	4.53	22.97	4.73	4.86
30	9.01	4.45	2.02	10.63	4.51	2.36	13.15	4.60	2.86	15.57	4.68	3.33	16.55	4.72	3.51	18.06	4.77	3.79	20.79	4.86	4.28	22.61	4.93	4.59
32	8.63	4.65	1.86	10.25	4.71	2.18	12.77	4.80	2.66	15.19	4.88	3.11	16.16	4.92	3.28	17.68	4.97	3.56	20.40	5.06	4.03	22.23	5.13	4.33
34	8.21	4.86	1.69	9.84	4.92	2.00	12.36	5.01	2.47	14.77	5.09	2.90	15.75	5.12	3.08	17.27	5.18	3.33	19.99	5.27	3.79	21.81	5.34	4.08
35	8.00	4.97	1.61	9.62	5.02	1.92	12.14	5.11	2.38	14.56	5.20	2.80	<b>15.48</b>	<b>5.22</b>	<b>2.97</b>	17.05	5.28	3.23	19.78	5.38	3.68	<b>21.43</b>	<b>5.50</b>	<b>3.89</b>
36	7.77	5.07	1.53	9.40	5.13	1.83	11.92	5.22	2.28	14.34	5.30	2.71	15.31	5.33	2.87	16.83	5.39	3.12	19.55	5.48	3.57	21.38	5.55	3.85
38	7.30	5.28	1.38	8.93	5.34	1.67	11.44	5.42	2.11	13.86	5.51	2.52	14.84	5.54	2.68	16.36	5.59	2.93	19.08	5.69	3.35	20.90	5.75	3.63
40	6.80	5.48	1.24	8.42	5.54	1.52	10.94	5.63	1.94	13.36	5.71	2.34	14.34	5.74	2.50	15.85	5.80	2.73	18.58	5.89	3.15	20.40	5.95	3.43
42				7.88	5.73	1.38	10.40	5.82	1.79	12.82	5.90	2.17	13.80	5.94	2.32	15.31	5.99	2.56	18.04	6.08	2.97			
44				7.30	5.91	1.24	9.82	6.00	1.64	12.24	6.08	2.01	13.22	6.12	2.16	14.73	6.17	2.39						
46							9.20	6.16	1.49	11.62	6.24	1.86	12.60	6.28	2.01	14.12	6.33	2.23						

DATA DECLARED ACCORDING TO UNI EN 14511-2

## Key

Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 11.20. ANK 085 HP | HA (400V/3N/50Hz) Cooling capacity and input power

TAE °C	TEMPERATURE OF THE WATER PRODUCED (°C)																							
	-8			-5			0			5			7			10			15			18		
	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER	Pc (kW)	Pe (kW)	EER
-10	14.70	7.68	1.91	16.35	7.73	2.12	18.90	7.82	2.42	21.36	7.89	2.71	22.36	7.92	2.82	23.90	7.97	3.00	26.68	8.06	3.31	28.53	8.12	3.51
-8	14.38	6.95	2.07	16.03	7.00	2.29	18.58	7.09	2.62	21.04	7.16	2.94	22.03	7.20	3.06	23.57	7.24	3.26	26.35	7.33	3.59	28.20	7.40	3.81
-6	14.08	6.30	2.23	15.72	6.36	2.47	18.27	6.44	2.84	20.73	6.52	3.18	21.73	6.55	3.32	23.26	6.60	3.52	26.04	6.69	3.89	27.89	6.75	4.13
-4	13.79	5.73	2.41	15.43	5.79	2.66	17.98	5.87	3.06	20.44	5.95	3.44	21.43	5.99	3.58	22.97	6.04	3.80	25.75	6.13	4.20	27.60	6.19	4.46
-2	13.51	5.24	2.58	15.16	5.30	2.86	17.71	5.38	3.29	20.16	5.46	3.69	21.16	5.50	3.85	22.69	5.55	4.09	25.47	5.64	4.52	27.32	5.70	4.79
0	13.25	4.82	2.75	14.89	4.88	3.05	17.44	4.97	3.51	19.90	5.05	3.94	20.89	5.08	4.11	22.43	5.13	4.37	25.20	5.22	4.83	27.05	5.29	5.11
2	12.99	4.47	2.91	14.64	4.53	3.23	17.19	4.62	3.72	19.64	4.70	4.18	20.64	4.73	4.36	22.17	4.78	4.64	24.94	4.88	5.11	26.79	4.94	5.42
4	12.75	4.19	3.04	14.39	4.25	3.39	16.94	4.33	3.91	19.39	4.41	4.40	20.39	4.45	4.58	21.92	4.50	4.87	24.69	4.59	5.38	26.54	4.66	5.70
6	12.50	3.96	3.16	14.15	4.02	3.52	16.70	4.11	4.06	19.15	4.19	4.57	20.14	4.22	4.77	21.68	4.28	5.07	24.45	4.37	5.59	26.30	4.43	5.94
8	12.26	3.79	3.23	13.91	3.85	3.61	16.46	3.94	4.18	18.91	4.02	4.70	19.90	4.06	4.90	21.44	4.11	5.22	24.21	4.20	5.76	26.05	4.27	6.10
10	12.02	3.68	3.27	13.67	3.74	3.66	16.22	3.82	4.25	18.67	3.91	4.77	19.66	3.94	4.99	21.19	3.99	5.31	23.96	4.09	5.86	25.81	4.15	6.22
12	11.78	3.61	3.26	13.42	3.67	3.66	15.97	3.76	4.25	18.43	3.84	4.80	19.42	3.88	5.01	20.95	3.93	5.33	23.72	4.02	5.90	25.57	4.09	6.25
14	11.53	3.59	3.21	13.18	3.65	3.61	15.73	3.74	4.21	18.18	3.82	4.76	19.17	3.85	4.98	20.70	3.91	5.29	23.47	4.00	5.87	25.32	4.07	6.22
16	11.28	3.61	3.12	12.92	3.67	3.52	15.47	3.76	4.11	17.92	3.84	4.67	18.92	3.87	4.89	20.45	3.93	5.20	23.22	4.02	5.78	25.06	4.09	6.13
18	11.02	3.66	3.01	12.66	3.72	3.40	15.21	3.81	3.99	17.66	3.90	4.53	18.65	3.93	4.75	20.19	3.98	5.07	22.95	4.08	5.63	24.80	4.15	5.98
20	10.74	3.75	2.86	12.39	3.81	3.25	14.94	3.90	3.83	17.39	3.99	4.36	18.38	4.02	4.57	19.91	4.08	4.88	22.68	4.17	5.44	24.52	4.24	5.78
22	10.46	3.87	2.70	12.10	3.93	3.08	14.65	4.02	3.64	17.10	4.11	4.16	18.09	4.14	4.37	19.62	4.19	4.68	22.39	4.29	5.22	24.23	4.36	5.56
24	10.15	4.02	2.52	11.80	4.08	2.89	14.35	4.17	3.44	16.80	4.25	3.95	17.79	4.29	4.15	19.32	4.34	4.45	22.09	4.44	4.98	23.93	4.50	5.32
26	9.83	4.18	2.35	11.48	4.24	2.71	14.02	4.33	3.24	16.48	4.42	3.73	17.47	4.45	3.93	19.00	4.51	4.21	21.76	4.60	4.73	23.61	4.67	5.06
28	9.49	4.37	2.17	11.14	4.42	2.52	13.68	4.52	3.03	16.13	4.60	3.51	17.13	4.64	3.69	18.66	4.69	3.98	21.42	4.79	4.47	23.27	4.85	4.80
30	9.13	4.56	2.00	10.77	4.62	2.33	13.32	4.71	2.83	15.77	4.80	3.29	16.76	4.83	3.47	18.29	4.89	3.74	21.06	4.98	4.23	22.90	5.05	4.53
32	8.74	4.77	1.83	10.38	4.83	2.15	12.93	4.92	2.63	15.38	5.01	3.07	16.37	5.04	3.25	17.90	5.09	3.52	20.67	5.19	3.98	22.51	5.26	4.28
34	8.32	4.98	1.67	9.97	5.04	1.98	12.51	5.13	2.44	14.97	5.22	2.87	15.96	5.25	3.04	17.49	5.31	3.29	20.25	5.40	3.75	22.10	5.47	4.04
35	8.10	5.09	1.59	9.75	5.15	1.89	12.30	5.24	2.35	14.75	5.33	2.77	<b>15.68</b>	<b>5.35</b>	<b>2.93</b>	17.27	5.41	3.19	20.03	5.51	3.64	<b>21.69</b>	<b>5.59</b>	<b>3.88</b>
36	7.87	5.20	1.51	9.52	5.26	1.81	12.07	5.35	2.26	14.52	5.43	2.67	15.51	5.47	2.84	17.04	5.52	3.09	19.81	5.62	3.52	21.65	5.68	3.81
38	7.40	5.41	1.37	9.04	5.47	1.65	11.59	5.56	2.08	14.04	5.65	2.48	15.03	5.68	2.65	16.57	5.73	2.89	19.33	5.83	3.32	21.17	5.90	3.59
40	6.89	5.62	1.23	8.53	5.68	1.50	11.08	5.77	1.92	13.53	5.85	2.31	14.52	5.89	2.47	16.06	5.94	2.70	18.82	6.04	3.12	20.66	6.10	3.39
42				7.98	5.87	1.36	10.53	5.96	1.77	12.99	6.05	2.15	13.98	6.08	2.30	15.51	6.14	2.53	18.27	6.23	2.93			
44				7.40	6.06	1.22	9.95	6.15	1.62	12.40	6.23	1.99	13.39	6.27	2.14	14.92	6.32	2.36						
46							9.32	6.31	1.48	11.77	6.40	1.84	12.77	6.43	1.99	14.30	6.49	2.20						

HEATING MODE

COOLING MODE

DATA DECLARED ACCORDING TO UNI EN 14511-2

Key	
Pc	Cooling capacity (kW)
Pe	Input power (kW)
TAE	External air temperature (°C) d.b.



## ATTENTION

For the intermediate points, refer to the operating limits graphics (§ 9.1)



ΔT WATER DIFFERENT TO NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0.99	1	1.02	1.03
Input power correction factors	0.99	1	1.01	1.02

DEPOSIT FACTORS	[K*m2]/[W]	0.00005	0.0001	0.0002
Cooling capacity correction factors		1	0.98	0.94
Input power correction factors		1	0.98	0.95

## 12. PRESSURE DROPS|USEFUL HEADS TO THE SYSTEM

### 12.1. SYSTEM + PIPES SIDE EXCHANGER PRESSURE DROPS

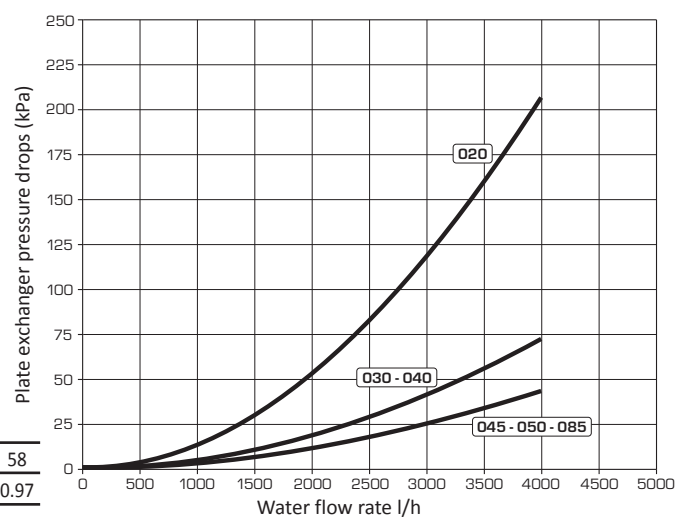
Inlet water temperature 40°C  
 Condenser outlet water temperature 45°C

Average water temperature 43° C

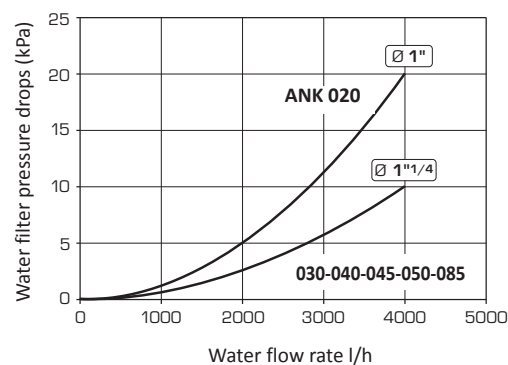
For temperatures other than 43°C, use the correction factors table

**CORRECTION FACTORS TABLE**

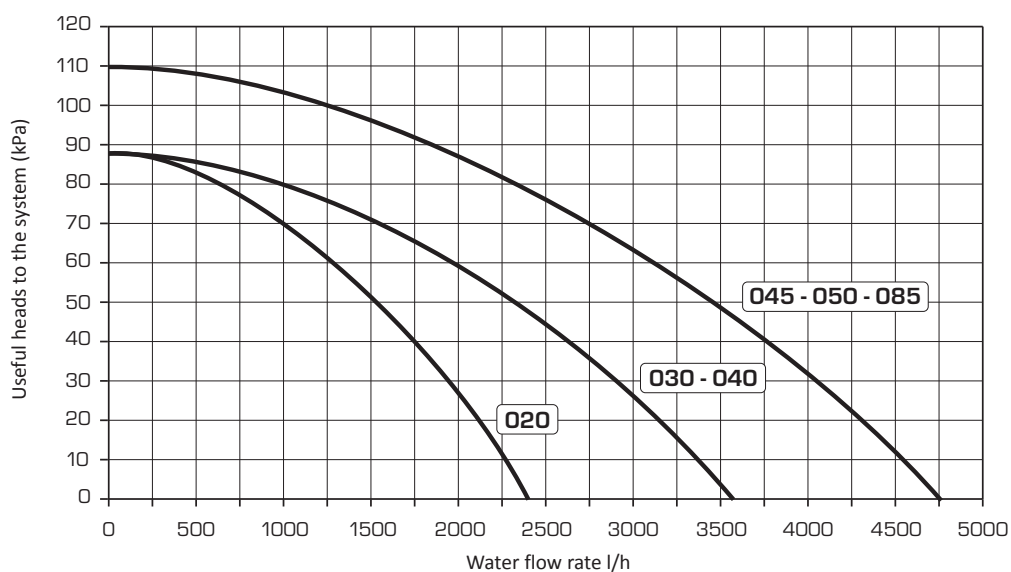
Average water temperature	10	13	18	23	28	33	38	<b>43</b>	48	53	58
Multiplicative coefficient	1.07	1.06	1.05	1.04	1.03	1.02	1.01	<b>1.00</b>	0.99	0.98	0.97



### 12.2. FILTER PRESSURE DROPS



### 12.3. USEFUL HEADS TO THE SYSTEM



### 13. ETHYLENE GLYCOL SOLUTION

- The cooling capacity and input power correction factors take the presence of glycol and the different evaporation temperature into account.
- The pressure drop correction factor considers the different flow rate resulting from the application of the water flow rate correction factor.
- The water flow rate correction factor is calculated in a way to keep the same  $\Delta t$  that would be present with the absence of glycol.

#### NOTE

An example is given on the next page to help graph reading.

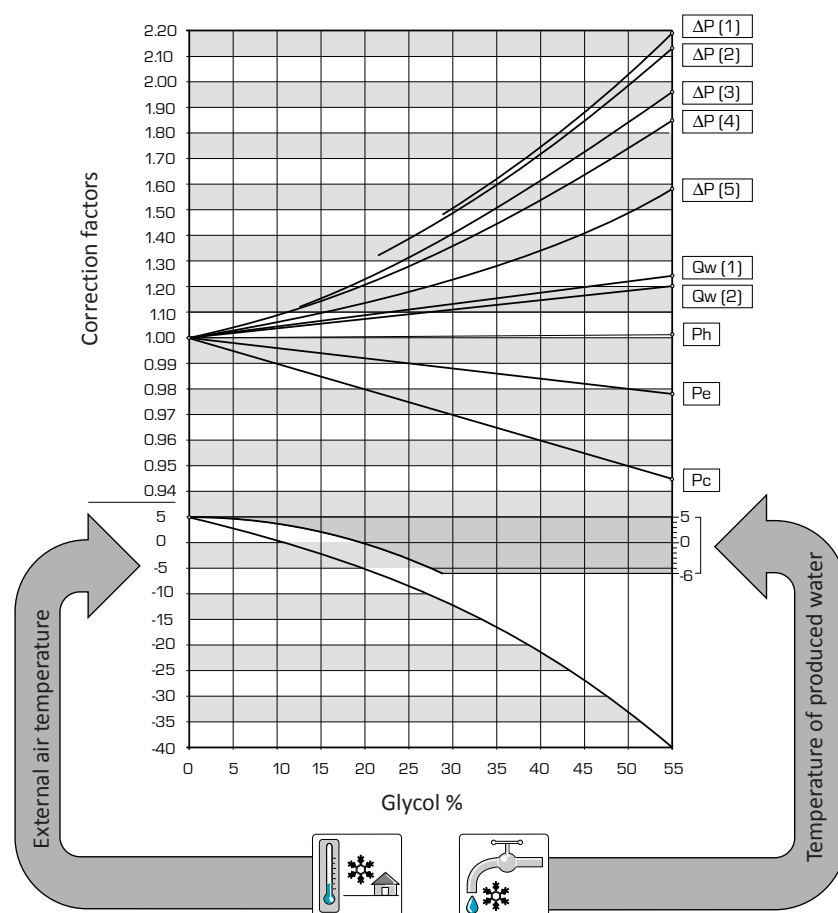
The diagram below can be used to establish the percentage of glycol necessary; this percentage can be calculated by taking one of the following factors into consideration:

Depending on which fluid is considered (water or air), the graph is interpreted from the right or left side. A point is obtained from the intersection point of the external temperature line or the water produced line and the relative curves, through which the vertical line must pass that will identify both the glycol percentage and the relative correction coefficients.

#### 13.1. HOW TO INTERPRET GLYCOL CURVES

The curves shown in the diagram summarise a significant number of data, each of which is represented by a specific curve. In order to use these curves correctly it is first necessary to make some initial reflections:

- If you wish to calculate the percentage of glycol on the basis of the external air temperature, enter from the left axis and on reaching the curve draw a vertical line, which in turn will intercept all the other curves; the points obtained from the upper curves represent the coefficients for the correction of the cooling capacity and input power, the flow rates and the pressure drops (remember that these coefficients must be multiplied by the nominal value of the size in question); while the glycol percentage value recommended to produce desired water temperature is on the lower axis.
- If you wish to calculate the percentage of glycol on the basis of the temperature of the water produced, enter from the right axis and on reaching the curve draw a vertical line, which in turn will intercept all the other curves; the points obtained from the upper curves represent the coefficients for the correction of the cooling capacity and input power, the flow rates and the pressure drops (remember that these coefficients must be multiplied by the nominal value of the size in question); while the lower axis recommends the glycol percentage value necessary to produce water at the desired temperature.
- Remember that the initial "EXTERNAL AIR TEMPERATURE" and "TEMPERATURE OF PRODUCED WATER" values are not directly related, therefore it is not possible to refer to the curve of one of these values and obtain corresponding point on the other curve.



#### KEY:

Pc	Cooling capacity correction factor
Pe	Input power correction factor
Ph	Heating capacity correction factor
DP (1)	Correction factor for pressure drops with an average fluid temp. = 3.5 °C
DP (2)	Correction factor for pressure drops with an average fluid temp. = 0.5 °C
DP (3)	Correction factor for pressure drops with an average fluid temp. = 5.5 °C
DP (4)	Correction factor for pressure drops with an average fluid temp. = 9.5 °C
DP (5)	Correction factor for pressure drops with an average fluid temp. = 47.5 °C
Qw (1)	Correction factor for flow rates (evap) with an average fluid temp = 9.5 °C
Qw (2)	Correction factor of flow rates (condenser) with an average fluid temp. = 47.5 °C

#### NOTE

Although the graph shows an external air temperature of -40°C, the unit operational limits must be complied with.

## 14. EXPANSION VESSEL CALIBRATION

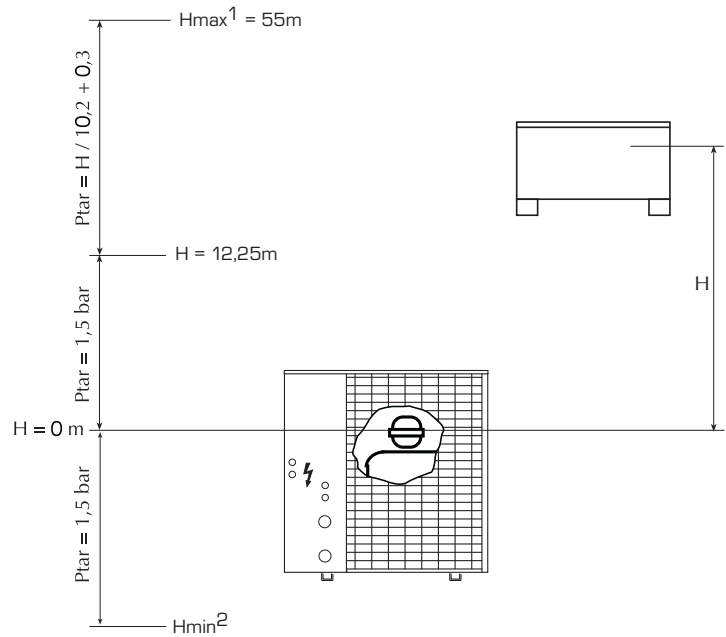
Standard factory-set pressure value of expansion vessel is 1.5 bar, maximum value is 6 bar.

Vessel calibration must be regulated depending on the maximum level difference (H) of the user (see figure) in agreement with the following formula:

$$p \text{ (calibration) [bar]} = H \text{ [m]} / 10.2 + 0.3.$$

For example: if level difference (H) is equal to 20 m, the calibration value of the vessel will be 2.3 bar.

less than 1.5 bar (i.e. for  $H < 12.25$ ), keep standard calibration.



## KEY

- (1) Check that highest installation is not higher than 55 metres.
- (2) Ensure that lowest installation can withstand global pressure in that position.

## 15. MINIMUM WATER CONTENT

<b>ANK</b>		<b>020</b>	<b>030</b>	<b>040</b>	<b>045</b>	<b>050</b>	<b>085</b>
Number of compressors	n°	1	1	1	1	1	1
Recommended minimum water content	l/kW	10	10	10	10	10	10



## ATTENTION

It is recommended to design systems with high water content (minimum recommended values shown in table), in order to limit:

1. The hourly number of inversions between operating modes.
2. Drop in water temperature during winter defrost cycles.
3. Use of a value lower than that recommended causes a greater reduction of the water temperature. Without compromising correct operation of the unit **IT IS RECOMMENDED NOT TO DROP BELOW 4l/kW.**

## 16. SOUND DATA

### Sound power

Aermec determines sound power values on the basis of measurements made in compliance with the ISO 9614-2 Standard, in agreement with that requested by Eurovent certification.

### Sound pressure

Sound pressure in free field conditions with reflective surface (directivity factor Q=2), in compliance with ISO 3744 Standard.

ANK	Total sound levels			Octave band [Hz]						
	Pow. dB(A)	Pressure.		125	250	500	1000	2000	4000	8000
		dB(A) 10 m	dB(A) 1 m	Sound potential for band central frequency [dB]						
<b>ANK020</b>	<b>68.0</b>	<b>36.0</b>	<b>48.0</b>	62.1	61.4	61.9	61.0	57.7	49.8	38.9
<b>ANK030</b>	<b>70.5</b>	<b>38.5</b>	<b>50.5</b>	64.1	63.4	64.2	63.6	61.0	52.7	41.4
<b>ANK040</b>	<b>70.5</b>	<b>38.5</b>	<b>50.5</b>	64.1	63.4	64.2	63.6	61.0	52.7	41.4
<b>ANK045</b>	<b>70.5</b>	<b>38.5</b>	<b>50.5</b>	64.1	63.4	64.2	63.6	61.0	52.7	41.4
<b>ANK050</b>	<b>70.5</b>	<b>38.5</b>	<b>50.5</b>	64.1	63.4	64.2	63.6	61.0	52.7	41.4
<b>ANK085</b>	<b>70.5</b>	<b>38.5</b>	<b>50.5</b>	64.1	63.4	64.2	63.6	61.0	52.7	41.4

Condenser inlet water temperature 30°C

Condenser outlet water temperature 35°C

External air temperature 7°C d.b. 6°C w.b.

## 17. CALIBRATIONS OF SAFETY AND CONTROL PARAMETERS

	min	Max.	default
Setting DHW temperature	25 °C	60 °C	45 °C
Differential thermostat in heating mode	5 °C	5 °C	5 °C
Cooling water temperature	-8 °C	7 °C	18 °C

		020	030	040	045	050	085
<b>COMPRESSOR MAGNET CIRCUIT BREAKERS</b>	A	5.5	6.5	8	9.5	10.5	11
<b>MANUAL RESET HIGH PRESSURE SWITCH</b>	bar	42	42	42	42	42	42
<b>LOW PRESSURE TRANSDUCER</b>	bar	2	2	2	2	2	2
<b>HIGH PRESSURE TRANSDUCER</b>	bar	40	40	40	40	40	40
<b>AUX. + PUMP MAGNET CIRCUIT BREAKERS</b>							
230V/1/50Hz	A	16	20	25	25	-	-
400V/3N/50Hz	A	5.5	6.5	8	9.5	10.5	11

#### Standards complied with WHEN DESIGNING and MANUFACTURING the unit:

##### SAFETY

1. Machinery Directive 2006/42/CE
2. Low Voltage Directive LVD 2006/95/CE
3. Electromagnetic Compatibility Directive EMC 2004/108/EC
4. Directive regarding pressurised devices PED 97/23/CE, EN 378,
5. UNI12735, UNI14276

##### ELECTRIC PART

1. IEC EN 60335-2-40,
2. IEC EN 61000-6-1/2/3/4

##### ACOUSTIC PART

1. ISO DIS 9614/2 (intensimetric method)

##### PROTECTION RATING

IP24

##### EUROVENT - EHPA

##### REFRIGERANT GAS

This unit contains fluoride gases with greenhouse effect covered by the Kyoto Protocol. Maintenance and disposal must only be performed by qualified staff, in compliance with standards in force.

##### ATTENTION

1. The refrigerant fluid circuit is pressurised. Interventions must only be performed on the appliance by ATS (Authorised Technical Service) or a qualified technician.
2. **GAS R410A**  
The chiller is delivered with a sufficient amount of R410A refrigerant fluid for operation. It is a chlorine-free refrigerant fluid that does not damage the ozone layer. R410A is not inflammable. However, all maintenance must be performed exclusively by a specialised technician with suitable protective equipment.
3. **Danger of electric shock!**  
The appliance must be disconnected from the mains power supply before the chiller is opened.

## 18. GENERAL WARNINGS FOR THE INSTALLER

AERMEC ANK are constructed according to the acknowledged technical standards and safety regulations. They have been designed for air conditioning and the production of domestic hot water (DHW) and must be used compatibility with their technical features. Any contractual or extracontractual liability of the Company is excluded for injury/damage to persons, animals or objects owing to installation, regulation and maintenance errors or improper use. All uses not expressly indicated in this manual are prohibited.

### 18.1. PRESERVATION OF THE DOCUMENTATION

1. The instructions and all related documentation must be given to the user of the system, who is responsible for preserving the same so that they are always on hand when required.
2. Read this file carefully; the execution of all jobs must be performed by qualified staff, according to the Standards in force on this subject in the different countries.
3. The appliance warranty does not cover the costs for ladders, scaffolding, or other elevation systems that may become necessary for carrying out servicing under warranty.
4. Do not modify or tamper with the appliance as dangerous situations can be created and the manufacturer will not be liable for any damage caused. The warranty shall become null and void if the above-mentioned indications are not respected.

### 18.2. WARNINGS REGARDING SAFETY AND INSTALLATION STANDARDS

1. The appliance must be installed by a qualified and suitably trained technician, in compliance with the national legislation in force in the country of destination.  
AERMEC will not assume any liability for damage if these instructions are not respected.
2. Before beginning any operation, **READ THESE INSTRUCTIONS CAREFULLY AND CARRY OUT THE SAFETY CHECKS IN ORDER TO REDUCE ALL HAZARDS TO MINIMUM.** All the staff involved must have thorough knowledge of the operations and any dangers that may arise at the moment in which the installation operations are carried out.



## 19. SELECTION AND PLACE OF INSTALLATION

Before beginning the installation process, decide with the customer where the appliance is to be installed, whilst paying attention to the following:

1. the support surface must be capable of supporting the unit weight;
2. the safety differences between the unit and other appliances or structures must be scrupulously respected so that the inlet and outlet air from the fans is free to circulate;
3. the unit must be installed by an enabled technician in compliance with the national legislation in force in the country of destination, respecting the minimum technical spaces in order to allow maintenance.

## 20. POSITIONING

Before handling the unit, verify the lifting capacity of the machines used, respecting the indications given on the packaging.

To handle the machine (ANK 020-085) on horizontal surfaces, use fork lift trucks or similar in the most appropriate manner, paying attention to the distribution of the unit weight.

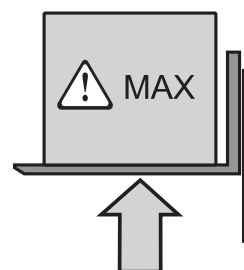
Position the unit in the place indicated by the customer, placing a rubber covering between the base and the support (min. thickness 10 mm.) or alternatively anti-vibration feet (ACCESSORIES).

For further information, refer to the dimensional tables

Fix the unit checking that it is level. Make sure that the hydraulic and electric part can be easily reached.

In the event of installation in places where gusts of wind are frequent, fix the unit suitably using tie-rods. Envision the installation of the condensate drain tray in the versions where envisioned (as ACCESSORY).

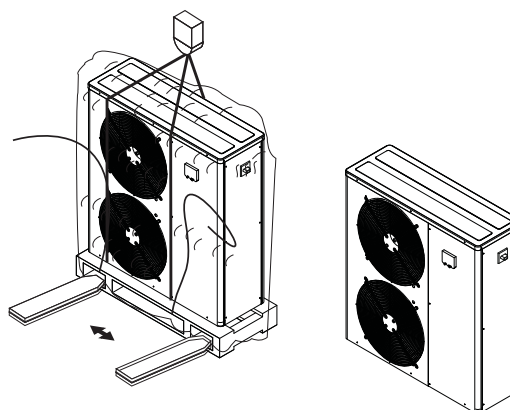
### HANDLING EXAMPLE



### ATTENTION

If the unit is installed in particularly windy locations, the installation of windbreaks is recommended to prevent unit malfunctioning

ANK 020 - 030 - 040 - 045 - 050 - 085

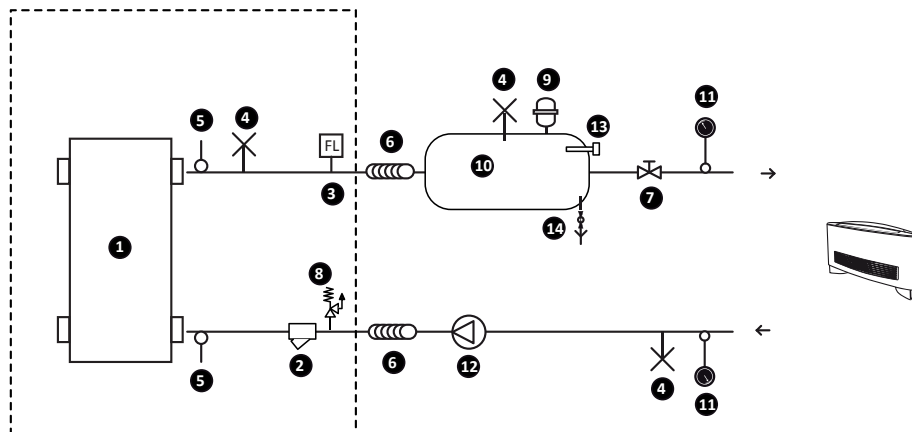


## 21. MAIN HYDRAULIC CIRCUITS

### 21.1. INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT TO ANK "H"(standard)

#### ANK H HYDRAULIC COMPONENTS

#### HYDRAULIC COMPONENTS RECOMMENDED OUTSIDE THE UNIT



#### STANDARD ANK COMPONENTS SUPPLIED AS PER STANDARD

1	Plate exchanger
2	Water filter
3	Flow switch
4	Air vent valve
5	Water temperature probes (IN/OUT)
8	Safety valve

#### RECOMMENDED COMPONENTS NOT SUPPLIED FOR WHICH INSTALLER IS RESPONSIBLE

6	Anti-vibration joints
7	Cut-off cocks
9	Expansion vessel
10	System storage tank (installation recommended whenever the system water content is less than that indicated in TAB. 2).
11	Manometer
12	Pump
13	Resistance
14	Drain cock

PH	6-8
Electric conductivity	Less than 200 mV/cm (25°C)
Chloride ions	Less than 50 ppm
Sulphuric acid ions	Less than 50 ppm
Total iron	Less than 0.3 ppm
Alkalinity M	Less than 50 ppm
Total hardness	Less than 50 ppm
Sulphur ions	None
Ammonia ions	None
Silicone ions	Less than 30 ppm



#### ATTENTION

The choice and installation of components outside the NRP unit is the installer's responsibility, who must operate according to the code of practice and in compliance with the Standard in force in the country of destination.



#### ATTENTION

The hydraulic connection pipes to the appliance must be suitably dimensioned for the effective water flow rate requested by the system when running. The water flow rate to the heat exchanger must always be constant.



#### ATTENTION

Wash the system thoroughly before connecting the unit. This cleaning operation will eliminate any residues such as welding drips, scale, rust, or other impurities from the piping. These substances can also deposit inside and cause appliance malfunctioning. The connection piping must be adequately supported so that its weight is not borne by the appliance.



#### ATTENTION

##### SYSTEM DRAINING

If the system should stop during the winter period, the water present in the exchanger may freeze, causing irreparable damage to the exchanger itself.

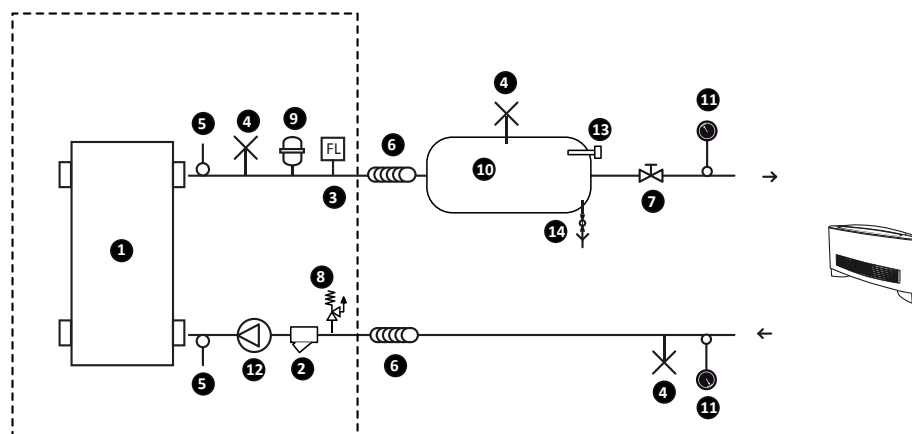
There are three solutions possible for the prevention of freezing:

- 1. Drain the water from the appliance completely.**
- 2. Operation with glycolated water,** with a percentage of glycol selected on the basis of the minimum external temperature envisioned.
- 3. Use of resistances.**  
In this case, the resistances must be live for the entire period that freezing may occur (machine in stand-by).

## 21.2. INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT TO ANK "HP"

## ANK HP HYDRAULIC COMPONENTS

## HYDRAULIC COMPONENTS RECOMMENDED OUTSIDE THE UNIT



## STANDARD ANK COMPONENTS SUPPLIED AS PER STANDARD

1	Plate exchanger
2	Water filter
3	Flow switch
4	Air vent valve
5	Water temperature probes (IN/OUT)
8	Safety valve
9	Expansion vessel
12	Pump

## RECOMMENDED COMPONENTS NOT SUPPLIED FOR WHICH INSTALLER IS RESPONSIBLE

6	Anti-vibration joints
7	Cut-off cocks
10	System storage tank
11	Manometer
13	Resistance
14	Drain cock

PH	6-8
Electric conductivity	Less than 200 mV/cm (25°C)
Chloride ions	Less than 50 ppm
Sulphuric acid ions	Less than 50 ppm
Total iron	Less than 0.3 ppm
Alkalinity M	Less than 50 ppm
Total hardness	Less than 50 ppm
Sulphur ions	None
Ammonia ions	None
Silicone ions	Less than 30 ppm



## ATTENTION

The choice and installation of components outside the NRP unit is the installer's responsibility, who must operate according to the code of practice and in compliance with the Standard in force in the country of destination.



## ATTENTION

The hydraulic connection pipes to the appliance must be suitably dimensioned for the effective water flow rate requested by the system when running. The water flow rate to the heat exchanger must always be constant.



## ATTENTION

Wash the system thoroughly before connecting the unit. This cleaning operation will eliminate any residues such as welding drips, scale, rust, or other impurities from the piping. These substances can also deposit inside and cause appliance malfunctioning. The connection piping must be adequately supported so that its weight is not borne by the appliance.



## ATTENTION

## SYSTEM DRAINING

If the system should stop during the winter period, the water present in the exchanger may freeze, causing irreparable damage to the exchanger itself.

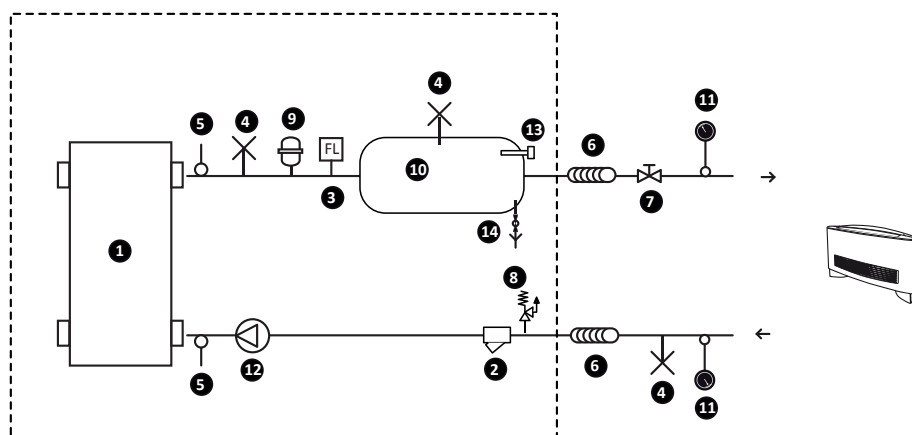
There are three solutions possible for the prevention of freezing:

1. **Drain the water from the appliance completely.**
2. **Operation with glycolated water**, with a percentage of glycol selected on the basis of the minimum external temperature envisioned.
3. **Use of resistances.**  
In this case, the resistances must be live for the entire period that freezing may occur (machine in stand-by).

## 21.3. INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT TO ANK "HA"

## ANK HA HYDRAULIC COMPONENTS

## HYDRAULIC COMPONENTS RECOMMENDED OUTSIDE THE UNIT



## STANDARD ANK COMPONENTS SUPPLIED AS PER STANDARD

- |    |                                   |
|----|-----------------------------------|
| 1  | Plate exchanger                   |
| 2  | Water filter                      |
| 3  | Flow switch                       |
| 4  | Air vent valve                    |
| 5  | Water temperature probes (IN/OUT) |
| 8  | Safety valve                      |
| 9  | Expansion vessel                  |
| 12 | Pump                              |
| 13 | 300 W resistance                  |
| 14 | Drain cock                        |

## RECOMMENDED COMPONENTS NOT SUPPLIED FOR WHICH INSTALLER IS RESPONSIBLE

- |    |                       |
|----|-----------------------|
| 6  | Anti-vibration joints |
| 7  | Cut-off cocks         |
| 10 | System storage tank   |
| 11 | Manometer             |

PH	6-8
Electric conductivity	Less than 200 mV/cm (25°C)
Chloride ions	Less than 50 ppm
Sulphuric acid ions	Less than 50 ppm
Total iron	Less than 0.3 ppm
Alkalinity M	Less than 50 ppm
Total hardness	Less than 50 ppm
Sulphur ions	None
Ammonia ions	None
Silicone ions	Less than 30 ppm

**ATTENTION**

The choice and installation of components outside the NRP unit is the installer's responsibility, who must operate according to the code of practice and in compliance with the Standard in force in the country of destination.

**ATTENTION**

The hydraulic connection pipes to the appliance must be suitably dimensioned for the effective water flow rate requested by the system when running. The water flow rate to the heat exchanger must always be constant.

**ATTENTION**

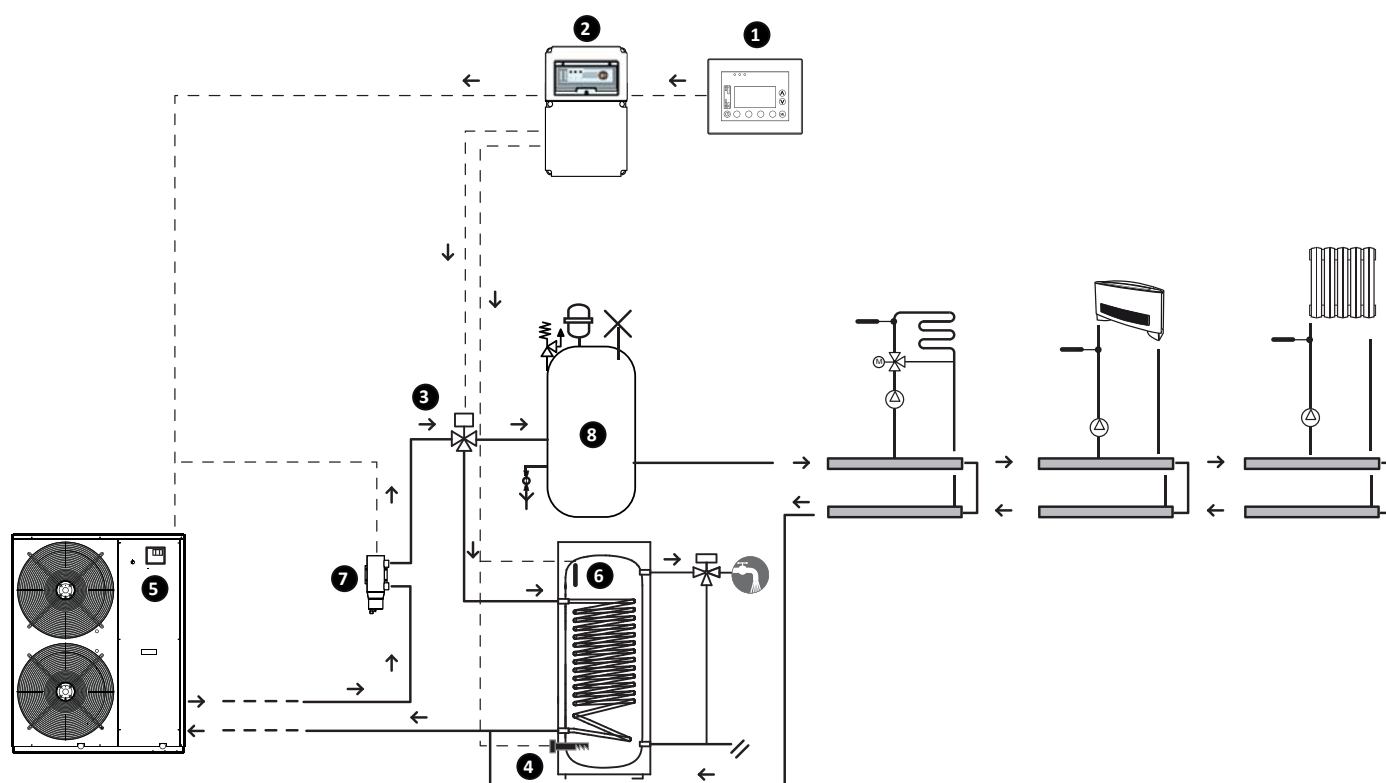
Wash the system thoroughly before connecting the unit. This cleaning operation will eliminate any residues such as welding drips, scale, rust, or other impurities from the piping. These substances can also deposit inside and cause appliance malfunctioning. The connection piping must be adequately supported so that its weight is not borne by the appliance.

**ATTENTION****SYSTEM DRAINING**

If the system should stop during the winter period, the water present in the exchanger may freeze, causing irreparable damage to the exchanger itself. There are three solutions possible for the prevention of freezing:

- 1. Drain the water from the appliance completely.**
- 2. Operation with glycoled water,** with a percentage of glycol selected on the basis of the minimum external temperature envisioned.
- 3. Use of resistances.** In this case, the resistances must be live for the entire period that freezing may occur (machine in stand-by).

## 22. EXAMPLE OF ANK 50 HP SYSTEM WITH DHW PRODUCTION with VMF-DHW ACCESSORY

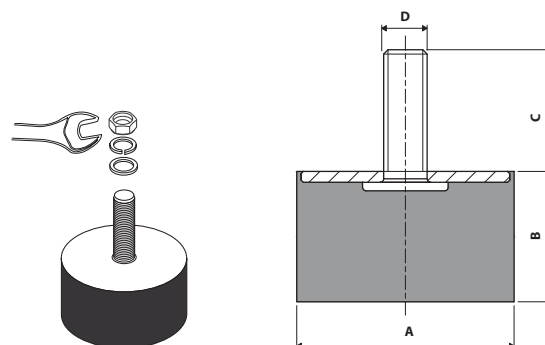
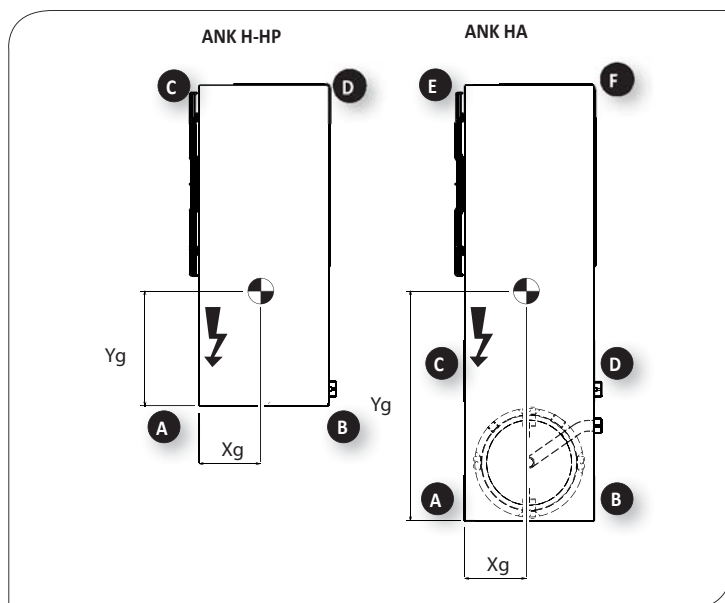


<b>ANK050HP</b>	
<b>VMF SYSTEM FOR THE PRODUCTION AND MANAGEMENT OF THE HOT WATER AND DHW (accessory) <sup>9</sup></b>	
<b>1</b>	E5 (black and white) VMF-ACS3KTN   6KTN   8KTN
<b>2</b>	- 3-way valve (not supplied) - DHW temperature probe (supplied) - Resistance for DHW storage tank (anti-legionella cycle management)
<b>3</b>	3-way valve (not supplied)
<b>4</b>	Electrical resistance for DHW storage tank (not supplied) (anti-legionella cycle management)
<b>5</b>	RS-485 MOD-BUS interface ( <b>MODU-485A ACCESSORY</b> ) <sup>10</sup>
<b>6</b>	DHW storage tank (not supplied)
<b>7</b>	Electrical resistance ( <b>BSKW ACCESSORY</b> )
<b>8</b>	System storage tank (not supplied)

<sup>9</sup> For further information regarding the VMF system, refer to the documentation available on the website: [www.aermec.com](http://www.aermec.com)

<sup>10</sup> The accessory is necessary for the VMF system to communicate with the heat pump.

## 23. BARYCENTRE AND ANTI-VIBRATION MOUNT POSITION

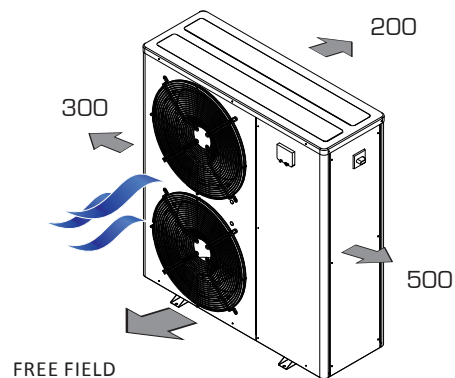


Mod.	A	B	C	D
VT9	40	30	23	M8
VT15A	50	30	28.5	M10

Barycentre and weight distribution

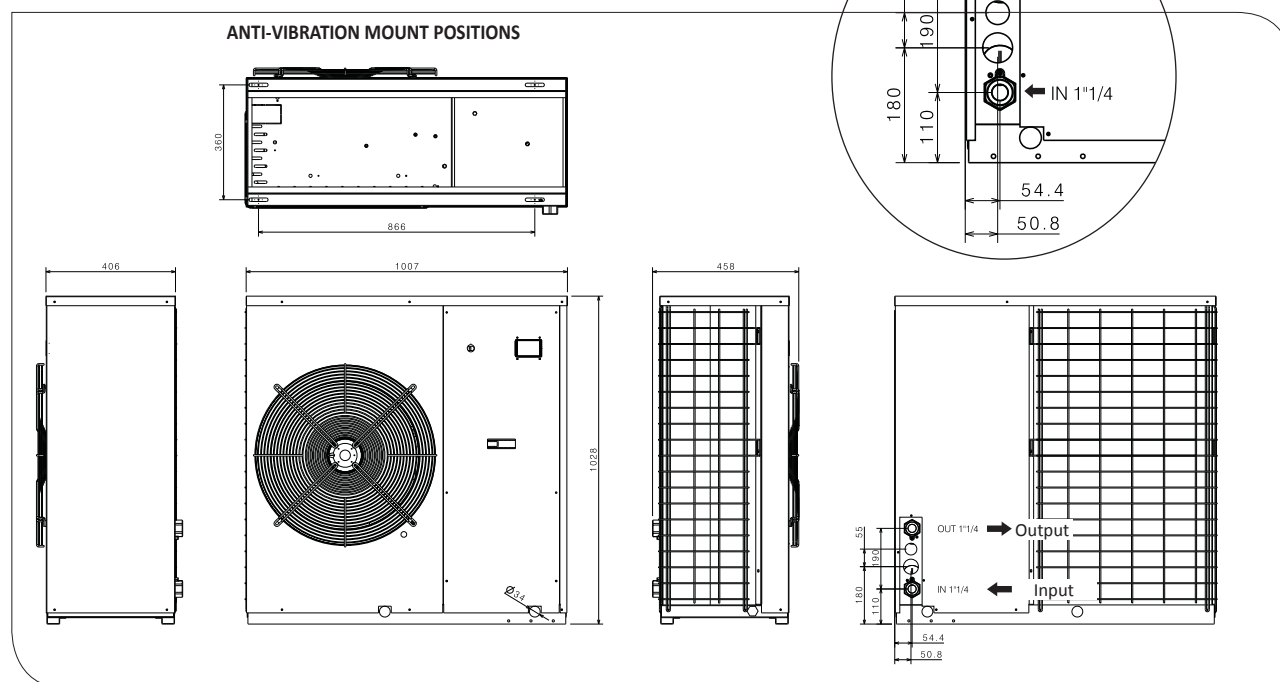
ANK	vers	Weight	Xg (mm)	Yg (mm)	A	B	C	D	E	F	KIT
ANK020	H	118	169	332	36.7%	30.1%	18.3%	15.0%	-	-	VT9
ANK020	HP	123	169	326	37.0%	30.4%	17.9%	14.7%	-	-	VT9
ANK030	H	149	199	365	35.4%	28.1%	20.4%	16.2%	-	-	VT9
ANK030	HP	154	199	359	35.7%	28.4%	20.0%	15.9%	-	-	VT9
ANK040	H	152	199	365	35.4%	28.1%	20.4%	16.2%	-	-	VT9
ANK040	HP	157	199	359	35.7%	28.4%	20.0%	15.9%	-	-	VT9
ANK045	H	165	204	362	34.9%	28.9%	19.8%	16.4%	-	-	VT9
ANK045	HP	175	203	352	35.6%	29.2%	19.3%	15.9%	-	-	VT9
ANK050	H	172	204	362	34.9%	28.9%	19.8%	16.4%	-	-	VT9
ANK050	HP	182	203	352	35.6%	29.2%	19.3%	15.9%	-	-	VT9
ANK085	H	174	204	362	34.9%	28.9%	19.8%	16.4%	-	-	VT9
ANK085	HP	184	203	352	35.6%	29.2%	19.3%	15.9%	-	-	VT9
ANK020	HA	160	192	594	9.5%	9.0%	24.2%	23.0%	17.6%	16.7%	VT15A
ANK030	HA	211	217	633	12.0%	11.7%	22.6%	22.0%	16.1%	15.6%	VT15A
ANK040	HA	214	217	633	12.0%	11.7%	22.6%	22.0%	16.1%	15.6%	VT15A
ANK045	HA	232	220	643	10.7%	10.8%	23.8%	24.0%	15.3%	15.4%	VT15A
ANK050	HA	238	220	643	10.7%	10.8%	23.8%	24.0%	15.3%	15.4%	VT15A
ANK085	HA	241	220	643	10.7%	10.8%	23.8%	24.0%	15.3%	15.4%	VT15A

### 23.1. MINIMUM TECHNICAL SPACES (mm)

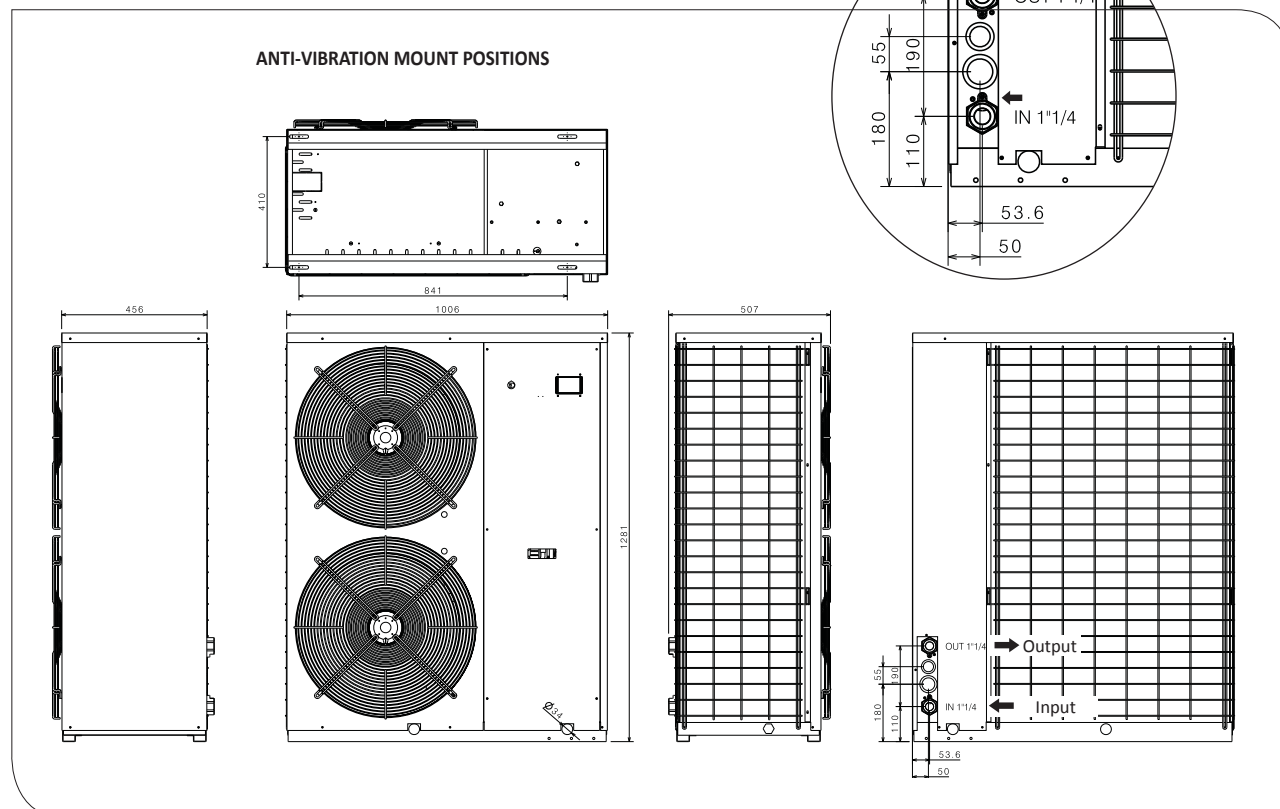


## 24. POSITION OF HYDRAULIC CONNECTIONS

### 24.1. ANK 020 H - HP

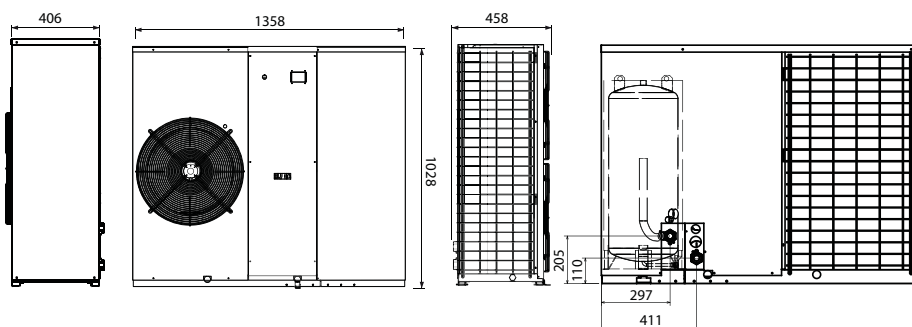
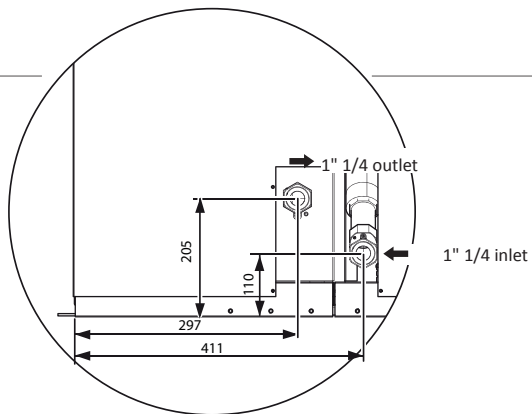
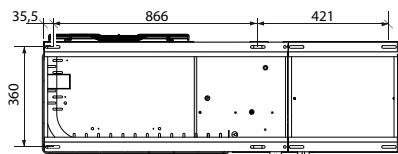


### 24.2. ANK 030 - 040 - 045 - 050 - 085 H - HP



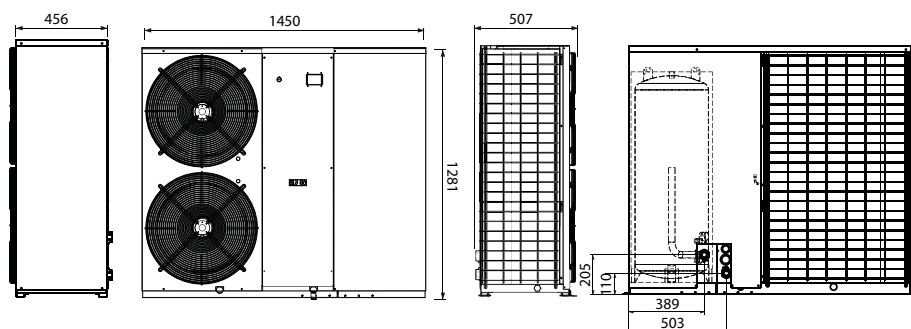
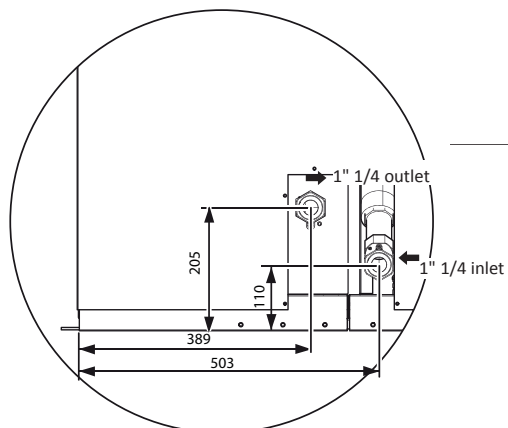
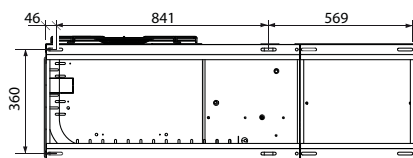
## 24.3. ANK 020 HA

ANTI-VIBRATION MOUNT POSITIONS



## 24.4. ANK 030 - 040 - 045 - 050 - 085 HA

ANTI-VIBRATION MOUNT POSITIONS





## 25. ELECTRIC CONNECTIONS

The ANK heat pumps are completely wired at the factory and only require connection to the electrical mains, downstream from a unit switch, according to that envisioned by the Standards in force on this subject in the country of installation.

It is also advised to check that:

- the electrical mains features are suitable for the absorption values indicated in the electrical data table.
- The unit must only be powered when installation has been completed (hydraulic and electric).
- Respect the connection indications of the phase and earth wires.
- The power supply line must have a relevant protection against short circuits mounted upstream and dispersions to earth, which isolate the system with respect to other utilities.
- The voltage must be within a tolerance of  $\pm 10\%$  of the nominal power supply voltage of the machine (for unbalanced three-phase unit max 3% between the phases). Whenever these parameters are not respected, contact the electric energy public body.
- For electric connections, use the cables with double isolation according to the Standards in force on this subject in the different countries.

### THE FOLLOWING ARE MANDATORY

- The use of an omnipolar magnet circuit breaker switch is mandatory, in compliance with the IEC-EN Standards (contact opening at least 3 mm), with suitable cut-off power and differential protection on the basis of the electric data table shown below, installed as near as possible to the appliance.
- It is mandatory to make an effective earth connection. The manufacturer is not liable for any damage caused by the lack of or ineffective appliance earth connection.
- For units with three-phase power supply, check the correct connection of the phases.

The cable sections shown in the table are recommend-



All the electrical operations must be carried out by **STAFF IN POSSESSION OF THE NECESSARY QUALIFICATIONS BY LAW**, suitably trained and informed on the risks related to these operations.



The features of the electrical lines and of the related components must be determined by **STAFF QUALIFIED TO DESIGN ELECTRICAL SYSTEMS**, in compliance with the international and national regulations of the place of installation of the unit and in compliance with the regulations in force at the time of installation.



For the installation requirements refer only to the wiring diagram supplied with the appliance. The wiring diagram along with the manuals must be kept in good condition and **ALWAYS BE AVAILABLE FOR ANY FUTURE INTERVENTIONS ON THE UNIT.**



It is mandatory to verify that the machine is watertight before making the electrical connections and it must only be powered after the hydraulic and electrical works have been completed.

ed for maximum lengths of 50 m.

For longer lengths or different cable laying, it is up to the **DESIGN ENGINEER** to dimension the appropriate line switch, the power supply line as well as the connection to the earth wire and connection cables depending on:

- the length;
- the type of cable;
- the absorption of the unit and the physical location and also the environment temperature.

### 25.1. ELECTRIC POWER CONNECTION TO THE ELECTRICAL MAINS

- Before connecting the unit to the power supply mains, make sure that the isolating switch is open.
- Open the front panel
- Use the holes in the lower part of the framework for the main electric power supply cable and the cables of the other external connections under the responsibility of the installer.
- It is prohibited to access positions not specifically envisioned in this manual with electric cables.



#### ATTENTION

It is prohibited to use the water pipes to earth the appliance.



#### ATTENTION

Check the tightness of all power wire clamps on commissioning and after 30 days from start-up. Successively check them every six months. Loose terminals can cause overheating of the cables and components.

### ELECTRIC DATA TABLE

ANK SIZE	Power supply	Compressors [n°]	Fans [n°]	TOTAL ABSORPTION		RECOMMENDED CABLE SECTION x 50 mt. max. length						
				L.R.A.:	F.L.A.:	SEC. A			SEC. B	EARTH (PE)	IL	
				[A]	[A]	phases [n°]	cables for single phase [n°]	Cable section [mm²]	Total cables [n°]	[mm²]	[mm²]	[A]
020	230V/1/50Hz	1	1	45 <sup>1</sup>	13.9	1	1	4	2	1.5	4	25
030	230V/1/50Hz	1	2	45 <sup>1</sup>	19.4	1	1	6	2	1.5	6	25
040	230V/1/50Hz	1	2	45 <sup>1</sup>	22.2	1	1	6	2	1.5	6	40
045	230V/1/50Hz	1	2	45 <sup>1</sup>	25	1	1	6	2	1.5	6	40
020	400V/3N/50Hz	1	2	39.7	6.1	3+N	1	2.5	4	1.5	2.5	16
030	400V/3N/50Hz	1	2	40.3	7.7	3+N	1	2.5	4	1.5	2.5	16
040	400V/3N/50Hz	1	2	54.3	9.1	3+N	1	2.5	4	1.5	2.5	16
045	400V/3N/50Hz	1	2	61.3	10.6	3+N	1	2.5	4	1.5	2.5	16
050	400V/3N/50Hz	1	2	71.3	11.8	3+N	1	4	4	1.5	4	25
080	400V/3N/50Hz	1	2	91.3	12.3	3+N	1	4	4	1.5	4	25

#### KEY

**F.L.I.:** Maximum input power

**F.L.A.:** Maximum input current

**L.R.A.:** Peak current

**Sec A:** Power supply

**3+N:** 3 phases + neutral

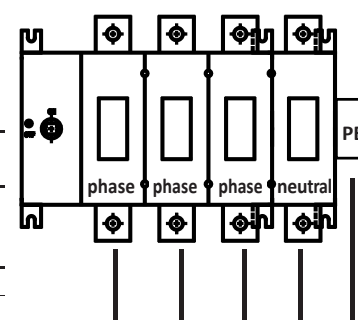
**Sec B:** Controls and safety device connection

**EARTH:** Earth wire to connect to unit

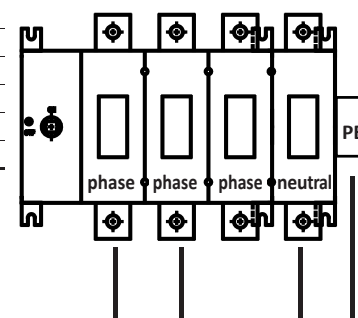
**IL:** Master switch

- The **230V/1/50Hz** versions have soft-start as per standard.

400V/3N/50Hz



230/1/50Hz



5. Avoid direct contact with non-insulated copper piping and with the compressor.
6. Identify the clamps for the electric connection and always refer exclusively to the wiring diagram supplied with the unit.
7. For the operational connection of the unit, take the power supply cable to the electric control board inside the unit and connect it to the U-N and PE clamps, respecting (U) phase, (N) neutral, (PE) earth in the event of single-phase power supply (230V/50Hz),
8. U-V-W as phases N as neutral and PE as earth in the event of three-phase power supply (400V/3N/50Hz).
9. Re-position the inspection panels.
10. Ensure that all protections removed for the electric connection have been restored before powering the unit electrically.
11. Position the system master switch (outside the appliance) at "ON".

## 25.2. AUXILIARY CONNECTIONS UNDER THE RESPONSIBILITY OF THE USER/INSTALLER

All clamps to which reference is made in the following explanations are part of the 13 POLE removable terminal board situated inside the electric control board and connected to the MODUCONTROL.

### 25.2.1. SUMMER/WINTER REMOTE CONTROL (C/F)

To prepare a remote summer/winter switch-over device, connect the device contact to clamps 3 and 5 of the 13 POLE terminal board.

### 25.2.2. ON/OFF CONTROL (IA)

To prepare a remote ON/OFF switch-over device, connect the device contact to clamps 4 and 5 of the 13 POLE terminal board.

### 25.2.3. REMOTE ALARM (AE)

If it should be necessary to display the machine block in a remote point due to operating anomaly, clamps 6 and 7 of the 13 POLE terminal board can be used to connect a visual or acoustic alarm signal.

### 25.2.4. REMOTE PANEL (TRA)

To prepare a remote summer/winter switch-over device, connect the device contact to clamps 8 and 9 of the 13 POLE terminal board.

### 25.2.5. CONTACT FOR THERMOSTATING DOMESTIC HOT WATER DHW (TWS)

To prepare a stand-alone thermostating device, connect to clamps 10 and 11 of the 13 POLE terminal board.

### 25.2.6. CONTACT FOR BOILER CONTROL

To prepare a boiler control, connect to clamps 12 and 13 of the 13 POLE terminal board.

## 25.2.7. PR3 CONNECTION (ACCESSORY)

If you should have the PR3 accessory, always connect it to the 13 POLE terminal board as shown in the wiring diagram. Remember that the maximum distance accepted is 150 mt.

**REMEMBER THAT THE PR3 AS WELL AS BEING CONNECTED MUST BE ENABLED (see subsequent pages).**

## 26. CONTROL AND COMMISSIONING

### 26.1. PREPARATION FOR COMMISSIONING

Please note that, on request by the Aermec customer or the legitimate owner of the machine, the units in this series can be started up by the Aermec After-Sales Service in your area (valid only on ITALIAN territory). The start of operation must be scheduled in advance agreed on the basis of the time frame regarding the realisation of the system. Prior to the intervention, all other works (electrical and hydraulic connections, priming and bleeding of air from the system) must have been completed.

### 26.2. COMMISSIONING

#### 26.2.1. PRELIMINARY OPERATIONS TO BE PERFORMED WITH NO VOLTAGE PRESENT

Control:

1. All safety conditions have been respected.
2. The unit is correctly fixed to the support surface.
3. The minimum technical spaces have been respected.
4. That the main power supply cables have appropriate cross-section, which can support the total absorption of the unit. (see electric data sections) and that the unit has been duly connected to earth.
5. That all the electrical connections have been made correctly and all the clamps adequately tightened.

#### 26.2.2. THE FOLLOWING OPERATIONS ARE TO BE CARRIED OUT WHEN THE UNIT IS LIVE.

1. Supply power to the unit by turning the master switch to the ON position. The display will switch on a few seconds after voltage has been supplied; check that the operating status is on OFF. (OFF BY KEY B on lower side of the display).
2. Use a tester to verify that the value of the power supply voltage to the U.V.W. phases is equal to 400V  $\pm 10\%$ ; also verify that the unbalance between phases is no greater than 3%.
3. Check that the connections made by the installer are in compliance with the documentation.
4. Verify that the compressor sump resistance/s is/are operating by measuring the increase in temperature of the oil pan. The resistance/s must function for at least 12 hours before start-up of the compressor and in any event, the temperature of the oil pan must be 10-15°C higher than room temperature.

## HYDRAULIC CIRCUIT

1. Check that all hydraulic connections are made correctly, that the plate indications are complied with and that a mechanical filter has been installed at the evaporator inlet. (Mandatory component for warranty to be valid).
2. Make sure that the circulation pump/s is/are operating and that the water flow rate is sufficient to close the flow switch contact.
3. Check the water flow rate, measuring the pressure difference between evaporator inlet and outlet and calculate the flow rate using the evaporator pressure drop diagram present in this documentation.
4. Check correct operation of the flow switches, if installed; on closing the cut-off valve at the heat exchanger outlet, the unit must display the block. Finally, open the valve and rearm the block.

## 26.3. MACHINE COMMISSIONING

The unit can be used after all of the above-mentioned controls have been performed.

1. Close the electric control board hatch.
2. Position the appliance master switch at ON.
3. Press the ON key for  $\odot$  3 sec to switch the machine on.  
By pressing the ON key  $\odot$ , the display will show the temperature of the water and the type of machine operation. Check the operating parameters set (set-point) and reset any alarms present. The unit will begin operating after a few minutes.

### 26.3.1. WITH THE MACHINE ON, CHECK

#### COOLING CIRCUIT CHECK:

- That the compressor input current is lower than the maximum indicated in the technical data table.
- That in models with three-phase power supply, the compressor noise level is not abnormal, symptom of inverse rotation. If this is the case, invert a phase.
- That the voltage value lies within the pre-fixed limits and that unbalance between the three phases (three-phase power supply) is not above 3%.
- The presence of any refrigerant GAS leaks, particularly in correspondence with the manometers pressure transducers and pressure switches pressure points. (vibrations during transportation could loosen the fittings).
- Overheating  
Comparing the temperature read using a contact thermostat positioned on the compressor intake with the temperature shown on the low pressure manometer (saturation temperature corresponding to the evaporation pressure). The difference between these two temperatures gives the overheating value. Optimal values are between 4 and 8°C.
- Pressing line temperature. If the subcooling and overheating values are regular, the temperature measured in the pressing line pipe at the outlet of the compressor must be 30/40°C above the condensation temperature.







## CONTROL AND SAFETY DEVICES

### CHECK:

- The manual reset high pressure switch.  
That stops the compressor, generating the respective alarm, when the flow pressure exceeds the set-point value. Its correct operation can be controlled by closing the air intake to the exchanger (in cooling mode) and keeping the high pressure manometer under control, check the intervention in correspondence of the calibration value. Attention: if there is no intervention at the calibration value, stop the compressor immediately and check the cause. Reset is manual and can only take place when the pressure drops below the differential value. (For the set and differential values, consult the technical manual).
- The anti-freeze control  
The anti-freeze control managed by electronic regulation and by the temperature probe located at the evaporator outlet is to prevent the formation of ice when the water flow rate is too low. Correct operation can be checked by progressively increasing the anti-freeze set-point until it exceeds the outlet water temperature and keeping the water temperature controlled with a high precision thermometer. Verify that the unit is off and generates the respective alarm. After this operation, take the anti-freeze set-point back to its original value.

## 26.4. SEASON CHANGEOVER

### 26.5. SEASON CHANGEOVER ON MACHINE

Access the **SET USER** list using the  key and conform the password 000 using the same key.  
Use the arrow keys to display  the **STA** parameter 0 index of the menu, select it using the  key and set it using the arrow keys  on the desired value, **VALUE 0** operating in cooling mode **VALUE 1** operating in heating mode.  
Confirm the selection using the  key and exit the menu using the .




## 26.6. SEASON CHANGEOVER FROM PR3 (ACCESSORY)

If in possession of the PR3, it must be enabled after electric connection.

### 26.6.1. ENABLING OF REMOTE PANEL

Access the **INSTALLER SET** list using the  key, enter the password for access to the menu:

**installer password 030.**

Use the arrow keys to display  the **PAN** parameter index 9 of the menu, select it using the  key, set it using the arrow keys  on the desired value:

**VALUE 1:**



- **SEASON CHANGE** piloted by the appliance.
- **ON/OFF CONTROL** from PR3

**VALUE 2:**

- **SEASON CHANGE** piloted from PR3
- **ON/OFF CONTROL** from the appliance

**VALUE 3:**

- **SEASON CHANGE** piloted from PR3
- **ON/OFF CONTROL** piloted from PR3

Confirm the selection using the  key and exit the menu using the .

Once the PR3 remote panel is enabled, just operate directly on the switch to change the season (**fig.1**). The machine will switch off automatically and switch back on with the operating mode selected.

For further information refer to the USER MANUAL



### ATTENTION

Commissioning must be performed with standard settings. Only when the inspection has been completed can the operating Set-Point values be changed.

Before start-up, power the unit for at least 12 hours, positioning the magnet circuit breaker switch and the door lock isolating switch at ON



(fig.1)

## 27. OPERATING FEATURES

### 27.1. SET-POINT IN COOLING MODE

(Factory set) = 7°C,  $\Delta t = 5^\circ\text{C}$ .

### 27.2. SET-POINT IN HEATING MODE

(Factory set) = 45°C,  $\Delta t = 5^\circ\text{C}$ .

If the unit power supply is restored after a temporary interruption, the mode set will be kept in the memory.

### 27.3. COMPRESSOR START-UP DELAY

Two functions have been set-up to prevent compressor start-ups that are too close.

- Minimum time from last switch-off 60 seconds in cooling mode.
- Minimum time from last switch-on 300 seconds in heating mode.

### 27.4. CIRCULATION PUMPS

The circuit board envisions outputs for the management of the circulation pumps.

The utilities side pump starts immediately and after the first 30 seconds of operating, when the water flow rate has gone into normal working conditions, the differential pressure switch/flow switch control functions are activated.

Whenever alarms do not occur, the appliance starts.

### 27.5. ANTI-FREEZE ALARM

The alarm<sup>11</sup> is always active even in stand-by mode. In order to prevent damage to the plate heat exchanger due to the water it contains freezing, on reaching a water temperature value below the minimum anti-freeze set of 3°C, the unit will be switched off immediately and the relative alarm is given. The unit can only re-start after manual reset and the anti-freeze probe measures a water temperature over 4°C<sup>12</sup>. With the unit off and with water temperature below 4°C, the heat exchanger anti-freeze electric resistance, mounted as per standard, is activated. It is switched off when the water temperature exceeds 5°C. The water pump is always active.

### 27.6. WATER FLOW RATE ALARM

The unit manages a water flow rate alarm controlled by a differential pressure switch or flow switch, installed as per standard on the machine. This type of safety device can intervene after the first 30 seconds of pump operation, if the water flow rate is not sufficient. The intervention of this alarm determines compressor and pump block.



#### ATTENTION

<sup>11</sup> This anti-freeze set temperature can only be varied by an authorised after-sales centre and only after having checked that there is a suitable % anti-freeze solution in the hydraulic circuit.

<sup>12</sup> Whenever this alarm intervenes, call an authorised after-sales service immediately.

**ATTENTION**

In the 230V/1/50Hz versions with soft-start, in the event of a power cut due to technical problems or for maintenance, in order to preserve good operation of the appliance it is mandatory to wait 5 minutes before re-applying voltage to the heat pump.

**ATTENTION**

In the cooling circuit it is prohibited to use oxygen or acetylene or other inflammable or poisonous gases because they are a cause of explosions or intoxication. We recommend to envision a machine book (not supplied, but the user's responsibility), which allows to keep track of the interventions performed on the unit. In this way it will be easy to suitably organise the interventions making research and the prevention of any machine breakdowns easier. Use the date to record date, type of intervention made (routine maintenance, inspection or repairs), description of the intervention, measures actuated...

**ATTENTION**

It is forbidden to **LOAD** the cooling circuit with a refrigerant different to that indicated. Using a different refrigerant gas can cause serious damage to the unit.

## 28. ROUTINE MAINTENANCE

All cleaning is prohibited until the unit has been disconnected from the electric power supply mains <sup>1</sup>. Make sure there is no voltage present before operating. Periodic maintenance is fundamental to keep the unit perfectly efficient under an operational and energy point of view.

**It is therefore essential to carry out periodic yearly controls on the:**

### 28.1. HYDRAULIC CIRCUIT

**CHECK:**

1. Water circuit filling.
2. Water filter cleaning.
3. Pressure switch or flow switch control.
4. The absence of air in the circuit (bleeding).
5. That the water flow rate to the evaporator is constant.
6. The thermal insulation of the hydraulic piping.
7. The percentage of glycol, when envisioned.

### 28.2. ELECTRIC CIRCUIT

**CHECK:**

8. Safety device efficiency.
9. The electric power supply voltage.
10. Electrical absorption.
11. Connections tightness.
12. The operation of the compressor guard resistance.

### 28.3. COOLING CIRCUIT

**CHECK:**

13. State of compressor.
14. Plate exchanger resistance efficiency.
15. Work pressure.
16. Leak test for water tightness control of the cooling circuit.
17. Operation of high and low pressure switches.
18. Carry out the appropriate checks on the filter dryer to check efficiency.

## 28.4. MECHANICAL CHECKS

**CHECK:**

1. **The tightening of the screws**, the compressors and the electrical box, as well as the exterior panelling of the unit. Bad fixing can cause abnormal noises and vibrations.
2. **The state of the structure**. If there are any oxidised parts, treat with paint suitable to eliminate or reduce oxidation.

## 29. EXTRAORDINARY MAINTENANCE

the ANKs are filled with R410A gas and are inspected at the factory. Under normal conditions they do not require Technical Assistance related to control of refrigerant gas. Through time gas leakage may be generated, causing refrigerant to escape and discharge the circuit, causing appliance malfunctioning. In these cases the refrigerant leakage points must be detected, repaired and the refrigerant load is to be replenished, respecting Law n°549 law dated 28 December 1993.

## 30. DISPOSAL


Envisions that disposal of the unit is carried out in conformity with the Standards in force in the different countries






### 31. PROCEDURE FOR SELECTION OF THE TYPE OF SYSTEM

Some parameters in the MODUCONTROL board must be set appropriately on the basis of the type of system in which the unit is installed.

These modifications, performed by the installer, are summarised and organised in the following guided procedures, with which to correctly set the unit circuit board parameters.

#### 31.1. HOW TO MODIFY A PARAMETER FROM THE USER MENU

To access the **USER SET** list, press the  key and confirm the password 000 using the same key. The index of the **USER** parameter is displayed along with a string of three characters that identifies it; the string remains displayed for one second, after which it is replaced by the value relative to the parameter itself.

To pass to the next parameter, use the arrow keys . To modify a parameter, just select it by pressing the  key, modify the value assigned via the arrow keys  and confirm the modification using the  key. To exit the menu, press the  key.

#### 31.2. HOW TO MODIFY A PARAMETER FROM THE INSTALLER MENU

To enter and modify the **INSTALLER** menu, follow the same procedure as for the user menu.

**Installer menu password: 030**

QUESTION	ANSWER	WHAT TO DO
(1) What type of system terminals are used in the heating circuit?	• The unit is a cooling only model	• Go to question 2
	• Radiant panels	• Set the parameter <b>StC</b> (index 3 USER menu) with the value of 35 °C
	• Low temperature fan coils or radiators	• Set the <b>StC</b> parameter (index 3 USER menu) with the value of 45°C (default value)
	• Other applications	• Set the parameter <b>StC</b> (index 3 USER menu) with the value of 55 °C
(2) Is the remote panel accessory installed (PR3) ?	• Not installed	• Go to question 3
	• Installed	• Set the <b>PAN</b> parameter (index 9 INSTALLER menu) with the appropriate value: <b>Value (1):</b> • Season control piloted from the circuit board • ON/OFF control enabled from PR3 <b>Value (2):</b> • Season control enabled from PR3 • ON/OFF control from panel on machine <b>Value (3):</b> • Season control enabled from PR3 • ON/OFF control enabled from PR3
(3) Is the production of DHW envisioned?	• Not envisioned • Envisioned	• Go to question 5 • Set the <b>ASA</b> parameter (INSTALLER MENU with the value (1)
(4) Is a 3-way diverter valve envisioned in the DHW production circuit?	• Not envisioned • Envisioned	• Go to question 5 • Set the <b>AAS</b> parameter (index C INSTALLER menu) with the appropriate value (in seconds). This parameter indicates the stand-by time for inversion of the 3-way diverter valve on the DHW production system.
(5) Is a room thermostat installed?	• Not envisioned	• No operation
	• Envisioned	• This parameter enables a digital clamp <b>ID</b> (indicated on the circuit board with the code <b>TRA</b> ) to which a room thermostat must be connected, used to disable the compressors and the integrative resistances. Set the <b>trA</b> parameter( index D INSTALLER menu), with the appropriate value, selecting from: <b>1. Value (1 or 2): ENABLED</b> <b>2. Value (0 or 3): DISABLED</b> <b>3. Remember that the OPEN state on the clamp represents:</b> <ul style="list-style-type: none"> <li>the compressors and resistances block operation if the parameter is set at 1</li> <li>the compressors, pumps and resistances block operation if the parameter is set at 2</li> <li>represents the pump alarm (as in the previous software version), if the parameter is set at the value 3</li> </ul>



#### ATTENTION

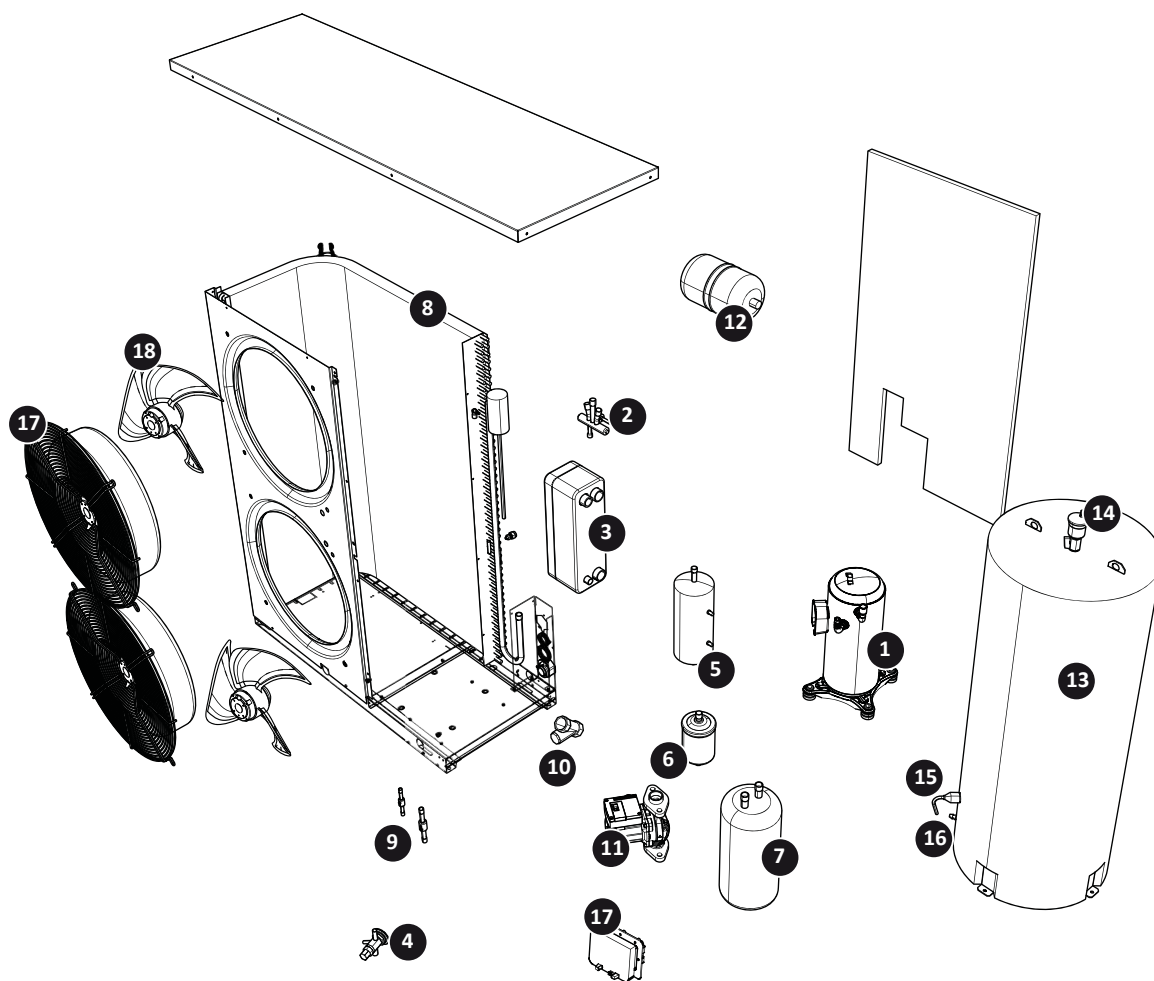
For further information, refer to the **USER manual** supplied with the chiller and also available on [www.aermec.com](http://www.aermec.com)

## 32. TROUBLESHOOTING

ANOMALY	CAUSE	REMEDY
The unit does not start	<ul style="list-style-type: none"> <li>No electric voltage</li> </ul>	<ul style="list-style-type: none"> <li>Check the presence of voltage</li> <li>Check the safety systems upstream from the appliance</li> </ul>
	<ul style="list-style-type: none"> <li>Master switch at OFF</li> <li>Remote switch at OFF (if present)</li> <li>Control panel at OFF</li> <li>Main switch at OFF</li> <li>Compressor magnet circuit breaker at OFF</li> </ul>	<ul style="list-style-type: none"> <li>Position at ON</li> </ul>
	<ul style="list-style-type: none"> <li>Power supply voltage too low</li> </ul>	<ul style="list-style-type: none"> <li>Check power supply line</li> </ul>
	<ul style="list-style-type: none"> <li>Remote control switch coil broken</li> <li>Circuit board broken</li> <li>Peak condenser broken</li> <li>Compressor broken</li> </ul>	<ul style="list-style-type: none"> <li>Replace the component</li> </ul>
Insufficient yield	<ul style="list-style-type: none"> <li>No refrigerant</li> <li>Dirty coils</li> <li>Water filter clogged</li> <li>Appliance dimensioning</li> <li>Operation outside of operational limits</li> </ul>	<ul style="list-style-type: none"> <li>Check the load and any leaks</li> <li>Clean the coils</li> <li>Clean the filter</li> <li>Check performance</li> <li>Check the operational limits using the graphics</li> </ul>
Noisy compressor	<ul style="list-style-type: none"> <li>Liquid return to the compressor</li> <li>Inadequate fixing</li> <li>Inverted phase</li> </ul>	<ul style="list-style-type: none"> <li>Check</li> <li>Invert a phase (400V/3N/50Hz)</li> </ul>
Noise and vibrations	<ul style="list-style-type: none"> <li>Contacts between metal bodies</li> </ul>	<ul style="list-style-type: none"> <li>Check</li> </ul>
	<ul style="list-style-type: none"> <li>Weak support</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen</li> </ul>
	<ul style="list-style-type: none"> <li>Loose screws</li> </ul>	<ul style="list-style-type: none"> <li>Tighten the screws</li> </ul>
The compressor stops due to intervention of the protections	<ul style="list-style-type: none"> <li>Excessive flow pressure</li> <li>Low intake pressure</li> <li>Low power supply voltage</li> <li>Electric connections fastened badly</li> <li>Operation outside of operational limits</li> </ul>	<ul style="list-style-type: none"> <li>Check the operational limits using the graphics</li> </ul>
	<ul style="list-style-type: none"> <li>Pressure switch malfunctioning</li> </ul>	<ul style="list-style-type: none"> <li>Replace the component</li> </ul>
	<ul style="list-style-type: none"> <li>Circuit breaker protection intervention</li> </ul>	<ul style="list-style-type: none"> <li>Check power supply voltage and calibration</li> <li>Check electric isolation of the windings</li> </ul>
Compressor high discharge pressure	<ul style="list-style-type: none"> <li>High external air temperature</li> <li>High utility inlet water temperature</li> </ul>	<ul style="list-style-type: none"> <li>Check the operational limits using the graphics</li> </ul>
	<ul style="list-style-type: none"> <li>Insufficient air flow</li> <li>Insufficient water flow</li> </ul>	<ul style="list-style-type: none"> <li>Check:</li> <li>1. Fan operation</li> <li>2. Cleanliness of the coils</li> <li>3. Pump operation (speed)</li> <li>4. Filter cleanliness</li> </ul>
	<ul style="list-style-type: none"> <li>Fan regulation anomalous operation</li> </ul>	<ul style="list-style-type: none"> <li>Check or replace if broken</li> </ul>
	<ul style="list-style-type: none"> <li>Air in the hydraulic system</li> </ul>	<ul style="list-style-type: none"> <li>Bleed the circuit</li> </ul>
	<ul style="list-style-type: none"> <li>Excessive refrigerant gas load</li> </ul>	<ul style="list-style-type: none"> <li>Restore the correct load</li> </ul>
Low discharge pressure	<ul style="list-style-type: none"> <li>Low external air temperature</li> </ul>	<ul style="list-style-type: none"> <li>Check the operational limits using the graphics, as above</li> </ul>
	<ul style="list-style-type: none"> <li>Low input water temperature</li> </ul>	<ul style="list-style-type: none"> <li>Empty and restore the gas load</li> </ul>
	<ul style="list-style-type: none"> <li>Humidity in the cooling circuit</li> </ul>	<ul style="list-style-type: none"> <li>Empty and restore the gas load</li> </ul>
	<ul style="list-style-type: none"> <li>Air in the hydraulic system</li> </ul>	<ul style="list-style-type: none"> <li>Bleed the circuit</li> </ul>
High intake pressure	<ul style="list-style-type: none"> <li>Insufficient gas load</li> </ul>	<ul style="list-style-type: none"> <li>Restore the correct load</li> </ul>
	<ul style="list-style-type: none"> <li>High external air temperature</li> <li>High utility inlet water temperature</li> <li>Thermostatic expansion valve too open or damaged</li> </ul>	<ul style="list-style-type: none"> <li>Check the operational limits using the graphics</li> <li>Adjust or replace if damaged</li> </ul>
Low intake pressure	<ul style="list-style-type: none"> <li>Low utility water inlet temperature</li> <li>Low external air temperature</li> <li>Thermostatic expansion valve damaged or blocked</li> </ul>	<ul style="list-style-type: none"> <li>Check the operational limits using the graphics</li> <li>Adjust or replace if damaged</li> </ul>
	<ul style="list-style-type: none"> <li>Insufficient water flow</li> <li>Insufficient air flow</li> </ul>	<ul style="list-style-type: none"> <li>Check:</li> <li>1. Fan operation</li> <li>2. Cleanliness of the coils</li> <li>3. Pump operation (speed)</li> <li>4. Filter cleanliness</li> </ul>



## 33. SPARE PARTS



## KEY

1.	Compressor
2.	Cycle reversing valve
3.	Plate exchanger
4.	Thermostatic valve
5.	Liquid separator
6.	Dehydrator filter
7.	Liquid storage tank
8.	Finned exchanger
9.	One-way valves
10.	Water filter
11.	Pump
12.	Expansion vessel
13.	System storage tank
14.	Cut-off vent valve
15.	200 W resistance
16.	Water drain
17.	MODU_CONTROL interface











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